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*John Gardiner.*











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HEADS OF LECTURES

ON THE

INSTITUTIONS OF MEDICINE.

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H E A D S  
OF  
LECTURES  
ON THE  
INSTITUTIONS OF MEDICINE.

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BY  
ANDREW DUNCAN, M. D. & P.

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THE FIFTH EDITION.

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## P R E F A C E.

**T**HE following Heads of Lectures have already been repeatedly presented to the Public. When they were reprinted in the year 1796, they appeared with very considerable alterations from the former editions. To these alterations I was chiefly led, from having abandoned the chemical doctrine of Phlogiston, and from having adopted the theory of the late illustrious and unfortunate LAVOISIER, which is at present received by almost every Philosopher in Europe.

When the present edition is compared with that which immediately preceded it, the alterations which have been made will not appear to be considerable. Still, however, the changes are such as will, I think, shew, that I am not inattentive to the progress of science, especially of those branches of science which have the most immediate tendency to elucidate the animal economy. Though the same general doctrines still prevail, many particular points have of late been happily illustrated by successful experiments. Of the discoveries thus made, I have endeavoured to avail myself. But much still remains to be discovered; much to be ascertained. I trust, therefore, that the present, as well as future editions



tions of these Heads of Lectures, if I shall ever again superintend the publication of them, will abundantly demonstrate the continuance of my exertions for improving our knowledge of the philosophy of the human system, which is the only sure basis of rational practice in medicine.

EDINBURGH, }  
Oct. 20. 1801. }



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HEADS



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HEADS OF LECTURES

ON

PATHOLOGICAL PHYSIOLOGY.

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*Concerning the Nature and Properties of the  
different Fluids and Solids of the Animal  
Body, and the chief Morbid Affections to  
which they are subjected.*

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A. Of the FLUIDS.

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1. Chyle.

**V**ESSELS in which chyle is found—  
Materials from which it is formed—  
Matters employed in aliment—Matters  
furnished from the system itself—Means  
by which it is formed—the function of  
digestion—the action of the mesenteric  
glands.

Sensible qualities of chyle in the mam-  
malia—Colour—taste—specific gravity—

Spontaneous separation — Coagulation — Principal constituent parts — watery matter — oily or hydrocarbonous matter — Saccharine matter — coagulable matter, or Gluten — Fibrine, Albumen and Gelatine — Observations respecting an earthy matter in the chyle — Accidental impregnations of chyle — Influence of extraneous matters in changing its colour — in changing its other qualities — Time at which proper chyle is most abundant in the lacteals — changes which it undergoes in its passage to the blood — Causes of its disappearing speedily in the blood.

View of different morbid affections of the chyle, with observations on the means by which they may be prevented or removed; illustrated by remarks on particular diseases.

A. From quantity.

a. Superabundance. *Go. b.*

b. Deficiency.

a. a. From want of proper aliment.

*Atrophia lactantium* — Walker. *Leex.*

b. b.

*b. b.* From want of proper assimilation. *Dyspepsia—Vomitus—Emetotrophia.*

*c. c.* From a diseased state of the lacteal vessels. *Tabes mesenterica.*

B. From quality.

*a.* Depending on the natural constituents of chyle.

*a. a.* Watery part.

*b. b.* Saccharine part.

*c. c.* Coagulable part.

*d. d.* Oleaginous part.

*b.* Depending on the introduction of foreign matter.

*a. a.* Matter introduced with the aliment.

*b. b.* Matter furnished by the system.

## 2. Blood.

CONSTITUENT parts of the blood discovered by spontaneous separation—Halitus—Crassamentum—Serum.

Sensible qualities of the halitus—varieties in different animals—varieties in disease—Conjectures respecting the active im-

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Constituent parts of the remaining mass after the escape of the halitus—Fibrine and red particles forming the crassamentum; albumen, gelatine, salts and water forming the serum.

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SEROSITY—Circumstances in which it differs from water—Colour—Specific gravity—Taste—Effects produced by the action of heat—of alcohol—of putrefaction—Conclusions respecting its constituent parts—Water—Gluten—Salts—Opinions of different chemists respecting the nature of the salts which the serum contains—Muriate of Soda—Carbonate of Soda—Uncombined Soda—Carbonate of Ammonia—Phosphate of lime.

Examination of the constituent parts of the blood by chemical analysis—Substances obtained by distillation—Water—Spirit, improperly so called, containing carbonate of ammonia, and ammoniacal soap—Volatile dry salt—Oil—Residuum after distillation—substances obtained from it by burning—by the loadstone.

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Of the heat of the blood—varieties in different animals—its connection with the

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Of the life of the blood—antiquity of the opinion—arguments by which it has lately been attempted to be established—objections which have been urged against these arguments—general conclusions respecting this doctrine.

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View of the principal morbid affections to which the blood is subjected, of the symptoms by which they may be distinguished, and of the means by which they may be prevented or removed, illustrated by remarks on particular diseases.

I. Morbid Affections from changes in quantity.

A. Plethora.

- a. From an increase of the real quantity of the blood.

*Plethora vera.*

- b. From an increase of the volume of the blood.

*Plethora apparens.*

- c. From a diminution of the capacity of the bloodvessels.

*Plethora relativa.*

- d. From an increase of the quantity of blood in the arteries.

*Plethora arteriosa.*

- e. From an increase of the quantity of blood in the veins.

*Plethora venosa.*

- f. From an increase of the quantity of blood in a particular part.

*Plethora partialis.*

B. Inanition.

- a. From a deficiency of blood in the system in general.

*Inopia sanguinis vera.*

b. From

- b.* From a deficiency of blood in the arterial system.
- c.* From a deficiency in the venous system.
- d.* From a deficiency at particular parts.

## II. Morbid affections from changes in quality.

### A. From changes in the natural contents.

#### *a.* Red particles.

*Melanæma.*

#### *b.* Watery part.

*Aquosa tenuitas.*

#### *d.* Saline impregnation.

*Scorbutus.*

#### *e.* Glutinous.

*Hæmorrhœa petechialis.*

### B. From the introduction of foreign matters.

#### *a.* By the lacteal vessels.

#### *b.* By the lymphatics of the surface and other parts.

#### *c.* By the bloodvessels of the lungs, through their coats.

#### *d.* By bloodvessels at other parts, from wounds.

#### *e.* Foreign

e. Foreign matters generated or increased in the blood.

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Of the coagulable or glutinous part—its general analogy to the glutinous part of the blood—particulars in which they differ—substances producing the coagulation of it, or runnets—animal runnets—vegetable runnets—circumstances in which vegetable and animal runnets differ in their action as coagulants—different opinions respecting the principles on which runnets act—particulars in which the coagulable part of milk, agrees with the glutinous part of the blood—correspondence of both with the *gluten vegeto-animale* obtained from wheat and some other vegetables.

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varieties



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The peculiarities of the human milk.

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A. From changes with respect to quantity.

a. Defective secretion.

*Atrophia lactentium.* Sauv.

b. Superabundant secretion.

*Tabes nutricum.*

c. Obstruction to the discharge after secretion.

B. From changes with respect to quality.

a. By alterations in the natural constituent parts.

b. By the introduction of foreign matters.

a. a. Furnished from the system itself.

a. a. a. Salts of the blood.

b. b. b. Sebaceous matter from the glands about the nipple.

b. b. Introduced by the alimentary canal, or by the absorbents of other parts.

4. *Mucus.*

4. *Mucus.*

**E**X<sup>T</sup>ENT of this secretion over the animal system—its sensible qualities—its constituent parts—water—glutinous matter—saline matter—Muriate of Soda—Carbonate of Soda—Phosphate of Soda—Phosphate of Lime. Effects produced on mucus by the action of different substances—water—ardent spirit—oil—acids—alkalies—neutrals—metallic salts—Chemical analysis of mucus.

## Pathology of mucus.

A. Diminished secretion.

B. Augmented secretion.

*Catarrhus senilis. Gonorrhœa.*

C. Vitiated secretion.

*Coryza. Scarlatina anginosa.*

5. *Saliva.*

**O**R<sup>G</sup>ANS by which it is secreted—Universality of this secretion in animals—Quantity in the human species—Proportion to the hardness of the food—General properties of saliva—its sensible qualities—taste—smell—colour—specific gravity.



gravity. The chemical relations which it shews to other matters—Effects of the action of air—Water—Oil—Alkalies—Acids—Alcohol—Its action on metals—Chemical analysis of the saliva.

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B. Augmented secretion.

*Ptyalismus.*

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B. Diminished secretion,

*Anorexia. Dyspepsia.*

C.

C. Depraved secretion.

*Pica. Malacia.*

### 7. *Succus Pancreaticus.*

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B
times

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### Pathology of the bile.

- A. Defective secretion.
- B. Obstructed excretion.

*Icterus.*

C.

C. Biliary concretions.

D. Superabundant secretion.

*Cholera.*

E. Secretion morbidly acrid.

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A. Morbid increase of the discharge.

*Ephemera Sudatoria. Epubdrosis.*

B. Morbid obstruction of the discharge.

*Diarrhœa.*

II. *Urine.*

**O**RGANS by which the urine is secreted — causes producing great varieties in this fluid, consistently with a state of health—the age of the person by whom it is discharged—the temperature of the body prior to the discharge—the passions of the mind—the ingesta—distinctions of urine, as varied from this source—*Urina potûs*—*Urina chyli*—*Urina sanguinis*.

Sensible qualities of this secretion, in what may be considered as its most natural state—colour—smell—taste—specific gravity—heat—consistence—spontaneous separation.

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B 3                      distillation.



distillation.—Purposes for which the urinary discharge is intended.

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A. Defective secretion.

*Ischuria.*

B. Excessive secretion.

*Diabetes.*

C. Depraved secretion.

*Lithiogenesis.*

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Pathology



## Pathology of tears.

A. Morbid increase of the secretion.

*Epiphora.*

B. Morbid diminution.

C. Depraved secretion.

13. *Nervous Fluid.*

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B 4

probable

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**P**ECULIARITIES respecting the contents of the valvular lymphatic absorbents—sources from whence they are derived—sensible qualities of the lymph in its most pure state—water—glutinous matter—varieties from accidental impregnations—proofs of the great diversity of such impregnations—use of the fluid contained in the lymphatics—morbid changes to which it is subjected—means of counteracting these.

### 16. *General*

16. *General Conclusions.*

CONCLUSIONS respecting the fluids in general, from the observations offered on particular fluids—The analogy which the different fluids of the animal body have to each other—General constituents of all the fluids—Watery matter—Gutinous matter—Fibrine containing most azote—Albumen most oxygene—Gelatine most carbone—Saline matter—Oily or hydrocarbonous matter—Peculiar properties derived from these different constituent parts—qualities from a saline impregnation—qualities from a hydrocarbonous impregnation.

Circumstances in which the composition of animal matters differs from that of vegetables—Presence of azote as a primitive principle—Greater abundance of hydrogen—Phosphates—Property of affording, by heat, ammonia, the prussic acid, the zoonic acid—of undergoing the putrefactive fermentation—of being converted, by maceration in water, into a fatty matter and ammonia.

B. OF

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 B. OF THE SOLIDS.
 

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I. *Animal Solids in General.*

**A** PARENT diversity of the solids—  
 Properties in common to all the  
 solids—General constituent parts of the  
 solids — Water — Earthy matter — Gluti-  
 nous matter—Saline matters—Aërial mat-  
 ters—Metallic matters found in some of  
 the solids.

## Pathology of the Simple Solids.

## I.

*Morbi partium solidarum simplicissimi ex In-  
 stitutionibus Pathologiæ, auctore H. D. Gaubio.*

## I. Debilitas.

## A. Salvâ cohæfione.

*a.* Laxum, flaccidum in partibus mol-  
 libus.

*b.* Iners in partibus naturâ elasticis.

*c.* Flexile in ossibus.

## B. Dissolutâ cohæfione.

*a.* Tenerum, Gracile, in mollibus par-  
 tibus.

*b.* Tabidum



- b.* Tabidum itidem in mollibus.
- c.* Fissile in partibus naturâ tenacioribus.
- d.* Fragile in ossibus.

## II. Rigiditas.

- A. Firmitas insuperabilis.
  - a.* Tenax, in partibus mollibus.
  - b.* Durum, in mollibus quoque.
  - c.* Fragile, Vitreum, in ossibus.
- B. Fragilitas flecti nescia.
  - a.* Tenax, in partibus mollibus.
  - b.* Durum, in mollibus quoque.
  - c.* Fragile, Vitreum, in ossibus.

## II.

*A Table of the Diseases of the Simple Solids,*  
by DR CULLEN.

The Diseases of the Simple Solids are,

### I. Those of the naturally soft parts.

- 1. Mobility of the parts too great.

*Debile. Gaub. 157. 159.*

A. With respect to the force of cohesion,

*a.* Debility

## a. Debility with flexibility.

*Debile tenerum gracile.* Gaub. 161. 1.*Debile tabidum.* Gaub. 171. 2.

## A. from an overplus of water,

from original stamina,

from weak aliment,

from want of aliment,

from weak concoction,

from increased excretion,

from imperfect application.

## B. from weak cohesion of the concreting matter,

from heat,

from vitiated nutritious fluid,

from matter externally applied,

water, mucilage, &amp; .

## c. from extension near to rupture.

## d. from extension of cellular texture,

from erosion of cellular texture,

from cutting through some layers of a compound membrane, .

from taking away external compression.



E. Emptiness of vessels.

b. Debility with fragility.

*Debile fissile. Gaub. 161. 3.*

from want of humidity,

from cold,

from changes in the concreting matter.

B. With respect to flexibility, cohesion remaining.

a. Laxity with elasticity.

*Debile laxum flaccidum. Gaub. 160. 1.*

from all the causes of I. 1. A. a.

except c.

from want of tension.

b. Laxity without elasticity or flaccidity.

*Debile iners. Gaub. 160. 2.*

from an overplus of water,

from long rest in an extended state,

from a certain overstretching.

2. Mobility of the parts too little, or rigidity.

*Rigidum. Gaub. 164.*

A. Rigidity diminishing flexibility.

*Rigidum tenax. Gaub. 165. 1.*

a.

- a.* from an overplus of concreting matter,  
from original stamina,  
from much or very nourishing aliment,  
from vigorous concoction,  
from vigorous application.
- b.* from increased cohesion of the concreting matter,  
from cold,  
from external application of coagulants, astringents, &c.
- c.* from considerable extension.
- d.* from long rest in a contracted state.
- e.* from the condensation of cellular texture.
- f.* from a new growth of cellular texture.
- g.* from the shortening of cellular texture.
- h.* from a new growth of cellular texture joining parts naturally separate.
- i.* from full vessels.
- k.* from vessels becoming solid.

## B. Rigidity destroying flexibility.

*Rigidum durum. Gaub. 165. 2.*

from ossification,

from putrefaction.

## II. Those of the naturally hard parts.

## 1. Flexibility.

*Debile flexile. Gaub. 160. 3.*

A. from deficiency of hardening matter.

B. from the softening and washing out of hardened matter.

## 2. Fragility.

A. Spongeous.

*Debile fragile spongiosum. Gaub. 160. 4.*

a. from erosion of gluten and oil.

b. from putrefaction of the same.

B. Vitreous.

*Rigidum fragile vitreum. Gaub. 165. 3.*

a. from too great drying by age.

b. from deficiency of oil.

## III.

GENERAL HEADS of the OBSERVATIONS to  
be offered on the DISEASED STATE of  
the SIMPLE SOLIDS.

A. Diseased state depending on the  
composition of the solids.

C

a. Firmness

- a.* Firmness morbidly increased.
  - b.* ——— ——— diminished.
  - c.* Cohesion morbidly increased.
  - d.* ——— ——— diminished.
  - e.* Flexibility morbidly increased.
  - f.* ——— ——— diminished.
  - g.* Elasticity morbidly increased.
  - h.* ——— ——— diminished.
- B. Diseased states depending on the figure of the solids.
- a.* Alterations in the shape of natural parts.
  - b.* The growth of preternatural parts.

## *2. Muscular Fibre.*

**G**ENERAL characterizing properties of the muscular fibre—Sensible qualities—Colour—Weight—Smell—Taste—Cohesion—Structure—Figure—Elasticity—Flexibility—Examination of the opinion which supposes, that muscular fibres are a continuation of nerves—Objections to this opinion—Principles detected in muscular fibres by chemical analysis—Fibrine—Gelatine—Albumen—Extractive matter—Muriate and phosphate of soda—Phosphate of lime—Observations on the pathology

pathology of the muscular fibre in its simple state—Morbid weakness—Morbid strength.

### 3. *Cellular Membrane.*

**O**PINIONS at first entertained respecting cellular membrane—Its extent over the system — its general qualities — Colour—Texture — Cohesion—Communication of cells — Disputes respecting its sensibility—Different opinions of its origin — Arguments for supposing it to be produced from the glutinous part of the blood—Use of the cellular membrane—Differences between the cellular or simple and complex membranes of the body—Pathology of the cellular membrane—Firmness morbidly increased — Elasticity morbidly diminished.

### 4. *Vessels.*

**A**RTERIES—Cohesion and strength of arteries — Changes which gradually take place in the proportional strength of the arteries to that of the veins—Elasticity of the arteries—Flexibility—Division into ramifications—Different views of the di-

C 2
vision

vision of arteries—Trunks—Branches—Capillaries—Proportion which the area of a trunk bears to that of all its branches—Different calculations on this subject—Angles at which branches come off from trunks—Anastomosis of arteries—Terminations of arteries—into veins—into secretory extremities—into exhalent extremities—different kinds of exhalents—Disputes respecting the irritability of arteries—View of an opinion which supposes, that a peculiar set of nerves are appropriated to the vascular system—Pathology of the arteries—morbid dilatation—morbid contraction—ossification.

*VEINS.* Analogy between the veins and the arteries—comparison of the strength of the veins with that of the arteries—Proportion between the strength of the vena cava and aorta—Proportion between the diameters of the veins and arteries—Valves of the veins—Beginnings of the veins—View of the controversy, whether they ever arise from cavities—Pathology of the veins.

*LYMPHATICS.* Observations on the discovery



covery of the valvular lymphatic absorbent vessels—General appearance of these vessels—Strength—Valves—Course—Termination—Observations on the lymphatic glands—Examination of the opinion which supposes, that the lymphatics and bloodvessels anastomose in these glands—Examination of Mr Hewson's opinion respecting the use and structure of the lymphatic glands—Use of the lymphatic system in general—Extent of this system of vessels over the human body—Extent over animal bodies in general—Pathology of the lymphatics.

5. *Fat.*

CONDITION of the fat in the living body with the human species—Places in which it is principally found—The manner in which it is deposited in cells—General properties of fat—changes to which it is subjected in the progress of life—Chemical analysis—Oleaginous matter—Sebatic acid—Capable of different degrees of oxydation—Conversion of some  
C 3 other

other animal substances into fat—Opinions respecting the composition of fat—Varieties in the quantity of fat—Causes of these varieties—Causes producing the removal of fat after it has been deposited—Different opinions as to the channels by which it is conveyed from the cells of the membrana adiposa—Uses of the fat—Arguments brought to prove, that on re-absorption it serves for the nutrition of the system—Doubts respecting that opinion—Pathology of fat—Polyfarcia.

### 6. *Bone.*

**G**ENERAL appearance and qualities of bone in the adult—Account of its progress to this state—Appearance of the first rudiments of bone in the embryo—Gradual changes which these undergo—Different opinions as to the process by which these changes are effected—Observations on the opinion, that bone is formed by the ossification of arteries—Account of different opinions respecting the growth of bones—Opinion which supposes the circulation



circulation of an osseous juice—Opinion which supposes the ossification of successive layers of the periosteum—Observations on the structure of bone—Observations on the component parts of bone—Glutinous matter—Earthy matter—Phosphate of Lime—Carbonate of Lime—Chemical analysis of bone—Observations respecting the glutinous matter of bone, and the universality of the same matter over the animal system—Pathology of bone—Osteomalacia—Caries—Necrosis.

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*Concerning the Principal Functions of the most  
important Organs of the Human Body.*

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Of the FUNCTIONS IN GENERAL.

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**O**BSERVATIONS on animal life—on the distinction between the sentient and vital principles—on the powers of living animals more immediately dependent on the sentient principle—on those dependent on the vital principle—on the powers depending on their combined influence—Sensation—Causes exciting sensation—Circumstances by which changes are effected in sensations, independently of their causes—from difference in the condition of the sentient principle—a state of excitement—a state of collapse—from differences in the condition

dition of the nervous fluid—a state of mobility—a state of torpor—Muscular action—general causes of action—Volition—Stimulus—Diversity of actions in living animals—voluntary actions—actions with propensity—involuntary actions—actions without consciousness.



## OF PARTICULAR FUNCTIONS.

### I. *Digestion.*

**O**BSERVATIONS on the nature of the function of digestion—Different opinions respecting the general principle on which this function is to be explained—Antecedent circumstances to the process of digestion—The appetite for aliment of a fluid nature—Causes inducing it—Appetite for solid aliment—Different opinions respecting the causes of hunger—Variety in the substances used as food—Conditions necessary in all alimentary matters—Steps in the process of digesting these—Solution—Chylification.

Circumstances

Circumstances tending to solution, to which the aliment is subjected before entering the stomach—Circumstances to which it is subjected after it enters the stomach—Trituration—The action of different menstrua—Arguments corroborating the opinion, that a peculiar active menstruum is furnished by the stomach—Observations on the diversity of this menstruum in different animals—The fermentation taking place in the stomach—its influence in dissolving solid food—in correcting putridity—general conclusion respecting the means of solution in the stomach.

Chylification or assimilation—Inquiry whether all matters nourishing the system assume the form of chyle—Examination of different opinions respecting the formation of chyle—Inquiry whether chyle is to be considered as a new product, or as a mixture of parts previously existing in alimentary matters—Arguments by which the latter supposition is rendered probable—Causes by which an intimate combination may be supposed to be effected.

Morbid

Morbid affection of the Functions of  
Digestion.

I. Defective solution of aliment.

1. From the state of action exerted by the stomach.
2. From the state of the menstruum acting upon the aliment.
  - a. As not being supplied in sufficient proportion.
  - b. As being defective in solvent power.
  - c. As undergoing morbid changes, counteracting this power.

II. Improper assimilation.

1. From the state of the ingesta.
2. From the degree of heat in the stomach.
3. From the muscular action of the stomach itself.
4. From different matters acting as assimilating ferments in the stomach.

2. *Circulation.*

2. *Circulation.*

**D**ISCOVERY of the circulation—Course of the blood in the human body.

Powers by which the blood is moved in the course of circulation—The action of the heart—Calculations respecting the force of that action—Reasons why it is neither attended with volition nor consciousness—The action of the arteries—Controversy, whether the arteries act from a muscular power, or from simple elasticity—Examination of the evidence brought respecting the existence of a muscular coat in the arteries—Examination of the evidence respecting the irritability of arteries—Comparison of the power of the heart, with the causes retarding the motion of the blood—Inquiry, how far a proof of the natural action of arteries can be drawn from diseased states.

The vibratory or oscillatory motion of the capillary vessels—Observations on the arguments brought in proof of such a motion—from the insufficiency of other causes for moving the blood through these vessels—



vessels—from phenomena, particularly in morbid cases—Inquiry, how far this action can be considered as peculiar to the capillaries.

Observations on the *vis a tergo*, as it has been called, or the impulse given by one portion of blood to another—The extent of this action as a cause of the blood's motion.

Effects of the pressure on the bloodvessels from voluntary action of muscles—The means by which this is rendered a cause of progressive motion of the blood—The extent to which it operates in the human system.

Varieties taking place with respect to the course of the circulation—in the fœtus—in the liver—in the brain.

Changes produced in the blood by circulation—Loss of caloric—Loss of oxygene—Deposition of fibrine and albumen—Change to a more hydrogenated and carbonated state.

### Morbid affections of Circulation.

I. Affections with respect to the state of motion of the blood.

1. Preternatural increase of the celerity of motion.
  - a.* From the stimulus exciting the action, of the heart and arteries being augmented.
  - b.* From the irritability of the heart and arteries being augmented.
2. Preternatural diminution of the celerity of motion.
  - a.* From the stimulus acting on the heart and arteries being diminished.
  - b.* From the want of due irritability in these organs.
3. Preternatural increase of the momentum of the blood.
  - a.* From a peculiar irritability in the organs producing the motion of the blood.
  - b.* From a determined quantity of blood in motion.
  - c.* From a certain degree of tonic power in the moving organs.
4. Preternatural diminution of the momentum of the blood.
  - a.* From the want of a proper quantity of blood in motion.
  - b.* From



*b.* From the want of due irritability in the moving organs.

*c.* From the want of due tonic power in these organs.

5. Irregularity in the motion of the blood.

*a.* From circumstances producing an irregular supply of blood at the heart.

*b.* From circumstances affecting the condition of irritability in the vascular system.

II. Affections with respect to the distribution of the blood.

1. Increased determination to any particular part.

*a.* From causes increasing the irritability of the vessels in the part.

*b.* From causes augmenting the flow of blood in these vessels.

2. Preternatural diminution of the flow of blood to particular parts.

*a.* From causes diminishing the irritability or tonic power of the vessels leading to the part.

*b.* From accidents diminishing the flow

flow of blood to the vessels leading into the part.

### 3. *Of Nutrition.*

**T**HE sense in which the term nutrition is here to be adopted—View of the controversy, whether the nutritious fluid be conveyed by the bloodvessels, or by the nerves.

Examination of the arguments brought to support the hypothesis, that the nutritious fluid is conveyed by the nerves—Arguments in support of this opinion, drawn from the primary existence of the nervous system—from changes which the solids undergo, when communication by the nerves is intercepted—from the size of the head in infancy—from the quantity of blood carried to the brain—from the method of nutrition in the vegetable kingdom—Answers to these arguments—Objections to the hypothesis—from the qualities of the only fluid that can be supposed to be conveyed by the nerves—from the diminution of nutrition while the

the nervous functions remain entire—from the growth and nourishment of parts of the system not furnished with nerves.

Examination of the opinion which supposes, that the nutritious fluid is conveyed by the bloodvessels—Arguments in support of the probability of this opinion—from analogy—from the fitness of the fluid which they convey for the purposes of nutrition—from the universality of the sanguiferous system—from the gradual evolution of the different solids—from the effects arising from the interruption of bloodvessels—from the nutrition of organs by the inosculation of bloodvessels, although they be unconnected by any other means.

The application of nutritious matter—Growth—from elongation of vessels—from extension of fibres—from accretion of cellular texture—from deposition of earth, fat, or other matter—Reparation of waste—Circumstances counteracting nutrition, or causes of the decrementum corporis.

D

Morbid

Morbid Affections of the Function of  
Nutrition.

I. Preternatural diminution of nutrition.

- a.* From the want of a due quantity of nutritious matter.
- b.* From the want of necessary qualities in the nutritious matter.
- c.* From an improper application of the nutritious matter.

II. Preternatural increase of nutrition.

- a.* From an unusual supply of nutritious matter.
- b.* From a strong disposition to coagulation in the nutritious fluid.
- c.* From accidents promoting the application of the nutritious fluid to the staminal solids.

III. Imperfect nutrition.

- a.* From peculiarities in the nature of the nutritious matter.
- b.* From peculiarities in the mode of application.

4. *Of Secretion.*

**A**CCOUNT of the different organs by which the function of secretion is performed—glands—vessels—pores—Controversy, whether follicles exist in glands or not—Examination of different hypotheses respecting secretion—The supposition, that secreted fluids pre-exist in the blood, and that glands act as filters—The supposition, that secretion depends upon a peculiar fermentation—The supposition, that it depends on a peculiar action of the vessels—The supposition, that it depends on absorption from follicles.

General view of the different causes which may be supposed to operate in secretion—Circumstances which may have effect previous to the action of the secreting organ—Circumstances operating in the secreting organ itself—Circumstances which may have effect posterior to the action of the secreting organ—fermentation—absorption—mixture—General use of secretion.

## Morbid Affections of Secretion.

1. From increase.
2. From diminution.
3. From depravation.

## Causes of Morbid Affections of Secretion.

1. The state of the pabulum furnished for secretion.
2. The state of action of the secreting vessels.

5. *Of Absorption.*

**O**BSERVATIONS on the vessels by which absorption is performed—Question, whether the veins of the sanguiferous system ever act as absorbents—View of the arguments brought in proof of absorption by veins—from what is observed to happen with respect to the mesenteric veins—from what happens with respect to the veins of the penis—from œdematous swellings being produced by ligatures on veins—from the supposition that lymphatic absorbents are wanting in many parts of the body, and in some animals—Objections to the hypothesis, that the sanguiferous veins



veins ever act as absorbents—General conclusion.

Arguments proving that the valvular lymphatics are entirely a set of absorbent vessels—from the analogy of the lacteals—from the progress of virus in the system, whether venereal, cancerous, or the like—from the similarity between the contents of the lymphatics and those of the cavities from which they arise.

Causes producing the motion of fluids in the absorbent system—The means by which fluids enter absorbents—The necessity of the continuance of life for their admission—Different opinions respecting the manner in which the mouths of the lymphatics may be supposed to be affected by life—The supposition of ampullæ or bags—The supposition of the erection of villi similar to the papillæ of the tongue—General conclusion—The means by which fluids are moved in the lymphatics after having entered them.

Morbid Affections of Absorption.

I. Preternatural increase of absorption.

D 3

a. From

- a.* From causes facilitating the admission of fluids into the mouths of the lymphatics.
- b.* From causes facilitating the motion of fluids through the lymphatics.

## II. Preternatural diminution of absorption.

- a.* From a diminution of the action of the lymphatic vessels.
- b.* From causes obstructing the passage of fluids through the lymphatics.

### 6. *Of Excretion.*

**R**EMARKS on the function of excretion in general — Causes most commonly producing excretion — Muscular action of the excretory — The action of the vessels of the secreting organ — Accidental causes of excretion — Remarks on the excretion of the feces and urine in particular.

### Morbid Affections of Excretion.

#### I. Excretion morbidly increased.

- a.* From unusual stimuli applied to the excreting organ.
- b.* From



- b. From an augmentation of the sensibility of the excreting organ.

- a. a.* Arising from increased mobility  
of the nervous power.

- b. b.* Arising from a diminution of  
the natural coverings of parts.

## II. Excretion morbidly diminished.

- a. From the want of a due stimulus to the excreting organ.

- b. From uncommon insensibility of that organ.

### III. Depraved excretion.

- a. From a peculiar state of sensibility in the excretories.

- b. From preternatural stimuli being applied to excretories.

## 7. Of Respiration.

OBSERVATIONS on different conditions in the function of respiration—Respiration as a voluntary action—as an action with propensity—as an involuntary action—as an action without consciousness.

Actions by which the enlargement and  
D 4 diminution

diminution of the cavity of the thorax are produced—Circumstances commonly considered as giving rise to the enlargement of the thorax—the contraction of the diaphragm—the elevation of the ribs—the rarefaction of the air after its admission into the cavity of the thorax—Circumstances commonly considered as producing a diminution of the cavity of the thorax—relaxation of the muscles producing enlargement—the elasticity of the mediastinum—the contraction of the abdominal muscles—the elasticity of the cartilages and ligaments of the ribs—the contraction of muscles attached by one extremity to the ribs, and by the other to parts below—the weight of the ribs—the elasticity of the lungs—the contraction of the muscular fibres of the bronchiæ—Remarks on the opinion which supposes an expansive power of the lungs.

A view of different theories of respiration—Examination of the opinion which accounts for the alternate actions of respiration—from obstructions to circulation—from the compression of the phrenic nerves—

nerves—from an uneasy sensation at the end of expiration—Different accounts of the cause of the first inspiration, by those who have adopted this last hypothesis—Inquiry how far this hypothesis explains all the different states of respiration—Reasons for believing that in the ordinary state of respiration the power of the mind has no influence—Arguments shewing that, in this state, respiration is exactly similar to other spontaneous actions.

Explanation of ordinary respiration from an alternate contraction and relaxation of the diaphragm, independently of the influence of the will—Arguments shewing, that the diaphragm may be considered as being in a situation analogous to the heart—Cause of the first contraction of the diaphragm in the new-born infant—cause of the first relaxation—cause of subsequent contractions and relaxations—Principles upon which respiration may at pleasure be subjected to the influence of the will, although in its ordinary state it may be considered as arising from action, without sensation or consciousness—Account

count of some objections which have been urged against this hypothesis—Answers to these objections.

Observations on the use of respiration—View of different opinions respecting the use for which it is intended—to promote circulation through the lungs—to introduce air into the blood—to introduce nitre into the blood—to promote the intimate mixture of different parts of the blood—to condense the blood—to cool the blood—to generate heat—to draw something useful from the air—to allow the escape of a particular matter from the lungs—Arguments in proof of this last supposition—from the qualities of the air expired—from the change which the blood undergoes in point of colour by passing through the lungs—Answers to objections which have been brought against this opinion respecting the use of respiration—from the foetus in utero existing without respiration—from the want of respiration in fishes—Farther proof of the hypothesis from this last circumstance—and from the connection which universally subsists

subsists between the degree of respiration necessary for life and the colour of the blood in different animals.

### Morbid Affections of Respiration.

- I. Those respecting the repetition of action.
  - a.* Respiration preternaturally quickened.
  - b.* Respiration preternaturally slow.
- II. Those respecting the sensation excited.
  - a.* Painful respiration.
  - b.* Difficult respiration.
- III. Those respecting the manner in which respiration is performed.
  - a.* Respiration with uncommon noise.
  - b.* Respiration with less noise than in the natural state.

CAUSES of difficult RESPIRATION: From the INSTITUTIONES PATHOLOGICÆ of Dr GAUBIUS, arranged by Dr CULLEN.

Respiratio fit difficilis,—

I. Ob conditionem aëris.

1. Nimis rari.

2. Nimis

2. Nimis calidi,
3. Nimis denfi.

II. Ob angustiam viarum per quas aër transit in pulmones.

1. Faucium,
2. Glottidis,
3. Tracheæ.

III. Ob conditionem pulmonis minùs apti ad admittendum vel expellendum aërem; propter,

1. Vitium in potentiis motricibus, affectis,
  - A. Spasmo vel constrictione, ab
    - a.* Aëre nimis frigido,
    - b.* Aëre inquinato,
    - c.* Causis variis internis quæ agunt mediatè vel immediatè.
  - B. Rigiditate ab offectis bronchiis.
  - C. Paralyfi.
  - D. Actione propter dolorem inhibitâ.
2. Capacitatem pulmonum imminutam.
  - A. Obstructionem vel obstipationem.
    - a.* Humoribus, muco, fero, sanguine, pure, in bronchiis effusis.
    - b.* Humoribus



- b.* Humoribus, præfertim muco, vel calculo folliculis membranæ mucosæ infarctis.
- c.* Humoribus intra vasa congestis.
  - A. Plethorâ.
  - B. Inflammatione.
  - c. Scirrho.
- B. Compressionem externam.
  - a.* Tumore pulmonibus innato.
  - b.* Tumore partium vicinarum intra thoracem.
  - c.* Obesitate partium intra thoracem.
  - d.* Humoribus in thoracem effusis.
  - e.* Cavitate thoracis imminutâ.
    - a. a.* Ab ipsius mala formatione.
    - b. b.* Ab aucta mole abdominis.
      - A. Ob aquam vel aërem ibi accumulatum.
      - B. Ob viscus quoddam mole auctum.

HEADS of the OBSERVATIONS to be offered on the Causes of MORBID RESPIRATION.

- I. Causes depending on the condition of the air.
  - a.* Density.
  - b.* Rarefaction.
  - c.* Heat.
  - d.* Coldness.
  - e.* Mephitic impregnations.
- II. Causes depending on the state of the passages or cavities into which the air enters.
  - a.* Contraction of passages.
  - b.* Rigidity of cavities.
  - c.* Compression of cavities.
  - d.* Cavities being filled with other matters.
- III. Causes depending on the state of the organs enlarging or diminishing those cavities.
  - a.* Spasmodic affections.
  - b.* Paralytic



b. Paralytic affections.

c. Inflammatory affections.

### 8. *Of Animal Heat.*

**A** SHORT state of the principal facts respecting animal heat—Universality of the power of generating heat over the animal creation—Extent of heat in different species of animals—Uniformity in the same species—Heat of the human species—its stability in different temperatures of the atmosphere—Connection between the degree of heat peculiar to different animals, and the colour of the blood—Varieties in heat occurring from disease—Connection which these varieties, when occurring over the system in general, have with the state of circulation and respiration—Exceptions to this general rule—Morbid varieties in the heat of particular parts—Connection of these with the state of circulation at the part.

View of different theories respecting the cause of animal heat—Examination  
of

of the opinion which supposes, that animal heat is to be accounted for from mixture—from putrefaction—from friction—from respiration—from the nervous energy—An attempt to refute all these opinions.

Account of the theory of heat in general, and of animal heat in particular, proposed by Dr Crawford—Account of the opinion of Mr Rigby—of Mr John Hunter—of M. Lavoisier, Seguin, &c.

Account of the hypothesis, that the sensible heat, generated by living animals, is produced by the caloric in the blood passing from a latent to an active state; that this transition is the consequence of a chemical change in the blood, from carbonated hydrogen being evolved; and that this evolution is effected chiefly by the action of the vessels to which the blood is subjected—Explanation of some particulars which may occur as objections to this hypothesis—Attempt to render it probable, from endeavouring to prove the following propositions—1. That the blood contains both caloric and carbonated hydrogen. 2. That the  
the

the evolution of the carbonated hydrogen, in consequence of the action of the vessels, to which the blood is subjected in the course of circulation, produces the transition of caloric from a latent to an active state. 3. That as much sensible heat may be produced by this means as any animal is ever observed to generate. 4. That this hypothesis affords a satisfactory explanation of the principal phenomena of animal heat, particularly the most intricate and apparently contradictory phenomena.—Explanation of the general connection of the heat of the body with the state of the blood's motion—of the exceptions which occur to this rule—of the equality of heat over the system—of the exceptions to this rule in morbid cases—of the uniformity of heat in the same animal while in health, although exposed to great diversity of temperature—of the connection of animal heat with respiration—of its connection with the colour of the blood in different animals.

Observations on the use of the power of generating heat, possessed by living animals—

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mals—

mals—its influence as preserving the fluids of the system in a proper condition—its influence on the solids—its influence on the nervous power.

### Morbid Affections of Animal Heat.

#### I. Preternatural increase of the heat of the body.

- a.* From an increased action of the bloodvessels.
- b.* From an increase of hydrocarbone in the blood.
- c.* From an increase of caloric in the blood.
- d.* From a diminution of those excretions, which preserve the stability of the fluids.

#### II. Preternatural diminution of the heat of the body.

- a.* From a diminished action of the bloodvessels.
- b.* From a diminution of hydrocarbone in the blood.
- c.* From the want of a due supply of caloric to the blood.

*d.* From

d. From an increase of particular excretions.

### 9. *Of Muscular Motion.*

**O**BSERVATIONS on the phenomena of muscular motion—Manifest changes which muscles undergo upon contraction—in length—in thickness—in bulk—in hardness—in colour—Causes inducing the action of muscles—stimuli—volition—Circumstances in muscles with which their action is connected—peculiar configuration—contractile power—free communication with the sensorium by the intervention of nerves—Different theories of muscular action—Account of the hypothesis which supposes muscular action to proceed from the immediate influence of the mind—from the figure of muscular fibres—from fermentation in muscles—from blood rushing into muscles—from motions of the nervous fluid.

Use of muscular action—Primary use—Secondary consequences—in giving figure

to parts—in giving texture—in exciting the motion of fluids in the body—in preserving the general health of the system—in giving greater facility in motion to the moving fibres.

### Morbid Affections of Voluntary Motion.

- I. Those in which the influence of the will is counteracted.
  1. Spasmodic affections.
  2. Convulsive affections.
    - a.* From uncommon stimuli.
    - b.* From peculiar sensibility.
- II. Those in which the influence of the will is impaired or lost.
  - a.* From causes impeding the course, or altering the condition, of the nervous power.
  - b.* From accidents giving uncommon rigidity to the moving fibres.

10. *Of the External Senses.*

**R**EMARKS on the external senses in general—Observations respecting the variety in the external senses—Inquiry how far it may be accounted for from a difference in the nerves themselves—from a difference in the state of the extremities of the nerves—from the modification of impressions by the apparatus at their extremities—Observations on particular senses—Sense of touching—organs employed in touching—the external objects from which these organs are fitted to receive impressions—the use of this sense to the system—Remarks on the principal morbid affections of the sense of touching—Sense of tasting—organs employed—objects from which these organs are fitted to receive impressions—use of tasting—Remarks on the principal morbid affections of the sense of tasting—Sense of smelling—organs employed—external objects from which these organs are fitted to receive

E 3                      impressions



impressions—use of smelling—Remarks on the principal morbid affections of the sense of smelling—Sense of hearing—organs employed—external objects from which these organs are fitted to receive impressions—use of hearing—Remarks on the principal morbid affections of the sense of hearing—Sense of seeing—organs employed—external objects from which these organs are fitted to receive impressions—use of vision—Remarks on the principal morbid affections of the sense of vision.

## II. *Of the Internal Senses.*

**R**EMARKS on the functions to be considered under the general title of internal senses—Observations on the general agency of the mind over the body—Inquiry respecting the seat of connection between the mental and corporeal parts of the system—Inquiry how far a particular configuration of the brain is necessary for this connection—Conjectures respecting the



the causes on which the diversity in the mental faculties depends—Conjectures respecting the causes of the differences which occur in the mental faculties of the same individual at different times—Observations with regard to particular internal senses—imagination—judgment—memory—volition.

Morbid Affections of the Internal Senses.

I. Those depending on imperfect exertion of the mental faculties.

II. Those depending on erroneous exertion.

*a.* From increased impetus of the circulation at the brain.

*b.* From diminished impetus there.

*c.* From compression of the brain.

*d.* From irritation of the brain.

Observations on different modifications of delirium—Delirium ferox—Delirium mite.

12. *Of Sleep.*

**A**CCOUNT of the phenomena of sleep — Inquiry respecting its nature — Examination of the opinion which supposes sleep to depend on the exhaustion of the nervous fluid — Examination of the opinion which supposes it to depend upon compression of the brain — Examination of the opinion which ascribes sleep to exhausted irritability — Objections to these hypotheses — Inquiry how far sleep may not be referred to a law of the mind, by which, during its connection with the body, it has a constitutional disposition to alternate states of activity and rest — Conjectures respecting the manner in which those circumstances act, which either produce sleep, or protract watchfulness — Observations respecting the animals which remain in a torpid state during the winter season — Circumstances in which winter torpor differs from natural sleep — Conjectures as to the difference of the causes on which they depend — Inquiry how far torpor from cold may be ascribed

to

to a change induced on the state of the nervous fluid—Observations on the principal morbid affections of sleep—Pervigilium — Immodica dormitio — Somnia — Somnambulatio—Incubus.

### 13. *Of Death.*

GENERAL observations on the nature of death—Observations on different causes of death—injuries to the brain—lesion of vital functions — affections of nerves—age — Marks indicating death—cessation of the vital functions—insensibility and coldness—stiffness—putrefaction — General observations on other marks, as collapse of the eye, and the like—General conclusion respecting the characteristics of death.

Observations on resuscitation in cases of apparent death—General principles on which a recovery is to be attempted—Remarks on different practices which have been recommended—Account of the plan of procedure which should in general be adopted.

### 14. *Of*

14. *Of the Peculiarities of the Male.*

**O**BSERVATIONS on the secretion of semen by the testicles—The state of the semen as it is discharged—Observations on the use of the semen in generation—effects which it produces in the system by which it is secreted—Observations on the influence which it has on the passions of the mind—on the state of the muscular fibres in general—on the state of the voice—on the growth of the beard in men—on the size and fatness of the body in different animals—Observations on morbid affections resulting from alterations in the condition of the semen.

Remarks on the erection of the penis—Circumstances on which it immediately depends—View of different theories on which it has been accounted for—Inquiry whether it proceeds from obstruction to the return of the blood from the cells of the penis, or from an increased flow of the blood into these cells—Examination of the opinion which supposes that

that it proceeds from an action of nervous filaments surrounding the veins of the penis—from an action of the vena ipsius penis—from an increased action of the smaller vessels of the penis—Remarks on some circumstances which have been supposed to assist the erection of the penis—a full state of the bladder—action of the levatores ani muscles—the stimulus of the semen—the distension of the vesiculæ seminales—Observations on different morbid affections from the condition of erection—Defective erection—Violent erection—Painful erection—Impotence in the discharge of semen—Want of due retention of semen.

### 15. *Of the Peculiarities of the Female.*

**O**BSERVATIONS on the menstrual flux—An account of the phenomena commonly attending menstruation—A view of different theories on which the menstrual discharge has been attempted to be accounted for.

A view of the arguments brought in favour  
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vour of the supposition, that the menses depend on general plethora—Conclusions drawn from the position and structure of the uterus—from the necessity of a constant disposition to plethora in female habits—from a state analogous to the menses being induced in men by habitual blood-lettings—from the increase and acceleration of the menstrual discharge by high and plentiful feeding, sedentary life, the amputation of a limb, or similar circumstances—from the diminution of the menses by activity, spare diet, and the like—Answers to the different arguments drawn from these facts—Objections to the hypothesis—from the appearance of the menses with females when they are not in a plethoric state, and when there is even manifest proof of a high degree of inanition—from the frequent existence of a plethoric state in females, without any menstruation, when there is no reason to suspect any cause producing obstruction—from plethora not being removed by menstruation, when that discharge occurs with such a state of the system.

Examination



Examination of the opinion which supposes menstruation to depend on partial plethora—proof that the vessels of the uterus, at different times, contain very different quantities of blood—Evidence of the existence of partial plethora in the vessels of the uterus previous to menstruation—from symptoms preceding the discharge—from dissections near the menstrual period—Inquiry how far the existence of partial plethora is sufficient to explain all the phenomena of menstruation—Reasons for believing that it is not a cause fully adequate to the effect—from the regularity of the discharge in point of time—from the relief afforded by vicarious evacuations happening at the menstrual period, when the menses are obstructed.

Examination of the opinion which supposes, that on partial plethora there occurs an hæmorrhagic effort, regulated by the laws of the nervous system—Objections to this hypothesis—from circumstances tending those evacuations which supply the place of the menses—from different causes which obstruct menstruation—from  
the



the suspension of the menses during pregnancy and nursing.

Some account of a conjecture which supposes, that, with partial plethora, there occurs, at the time of menstruation, a peculiar action of the uterus itself, somewhat similar to that which happens in the impregnated state, occasioning delivery at the end of a determined period—Arguments in favour of this supposition—from the analogy of the impregnated uterus—from the regularity of the menstrual discharge—from the relief in cases of obstructed menses when evacuations of blood occur naturally—from the explanation which this hypothesis affords for many of the most intricate phenomena of menstruation—for the first appearance of the menses—for the periodical return of that discharge—for the limitation of it to a certain age—for the obstruction it during pregnancy and nursing.

Remarks on the use of menstruation in the female economy—The influence which it has in generation—Objections to the supposition, that it is intended for the  
nutrition

nutrition of the fœtus—Account of a conjecture that the menstrual discharge may serve to give a condition to the vessels of the uterus necessary for impregnation—Arguments in favour of this opinion—from the effects which hæmorrhage has on other parts—from the method in which women commonly reckon their pregnancy—from the existence of a state analogous to the menses in many other animals previous to conception.

### Morbid Affections of Menstruation.

#### I. Obstruction of the menstrual discharge.

- a.* From the want of proper accumulation in the uterus.
- b.* From the want of due periodical contraction.
- c.* From obstruction to the passage of blood into the cavity of the uterus.

#### II. Preternatural increase of the menstrual discharge.

- a.* From uncommon determination to the uterus.
- b.* From increased action of that viscus.
- c.* From

- c. From the want of due resistance to the impetus of blood at the uterus.

### 16. *Of Generation.*

**V**IEW of the different stages to which this function may be referred.

Coition—Inquiry whether the semen of the male be thrown into the uterus of the female—Inquiry respecting the existence of ova in the ovaria of females.

Conception — View of different opinions on this subject—Account of the supposition of the mixture of male and female semen—of the mixture of the male semen with the menstrual blood—of a peculiar sensation excited by the stimulus of the male semen on the os tincæ—of the introduction of an animalcule from the male semen into an ovum from the female — of the conjunction of organic particles from the male and female semen — Observations on the experiments and hypothesis of the Count de Buffon on this subject.

Pregnancy — Observations on the growth

growth of the fœtus—on the nutrition of the fœtus—on parts lodged in the uterus connected with the fœtus—on the changes which the uterus itself undergoes in pregnancy.

Delivery—Remarks on the signs of approaching delivery — account of the actions by which delivery is effected—conjectures respecting the causes inducing these actions—Observations on the principal morbid affections occurring in the various stages of generation — Monsters — Extra-uterine conception—Super-fœtation—Mola or false conception—Abortion.



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HEADS OF LECTURES

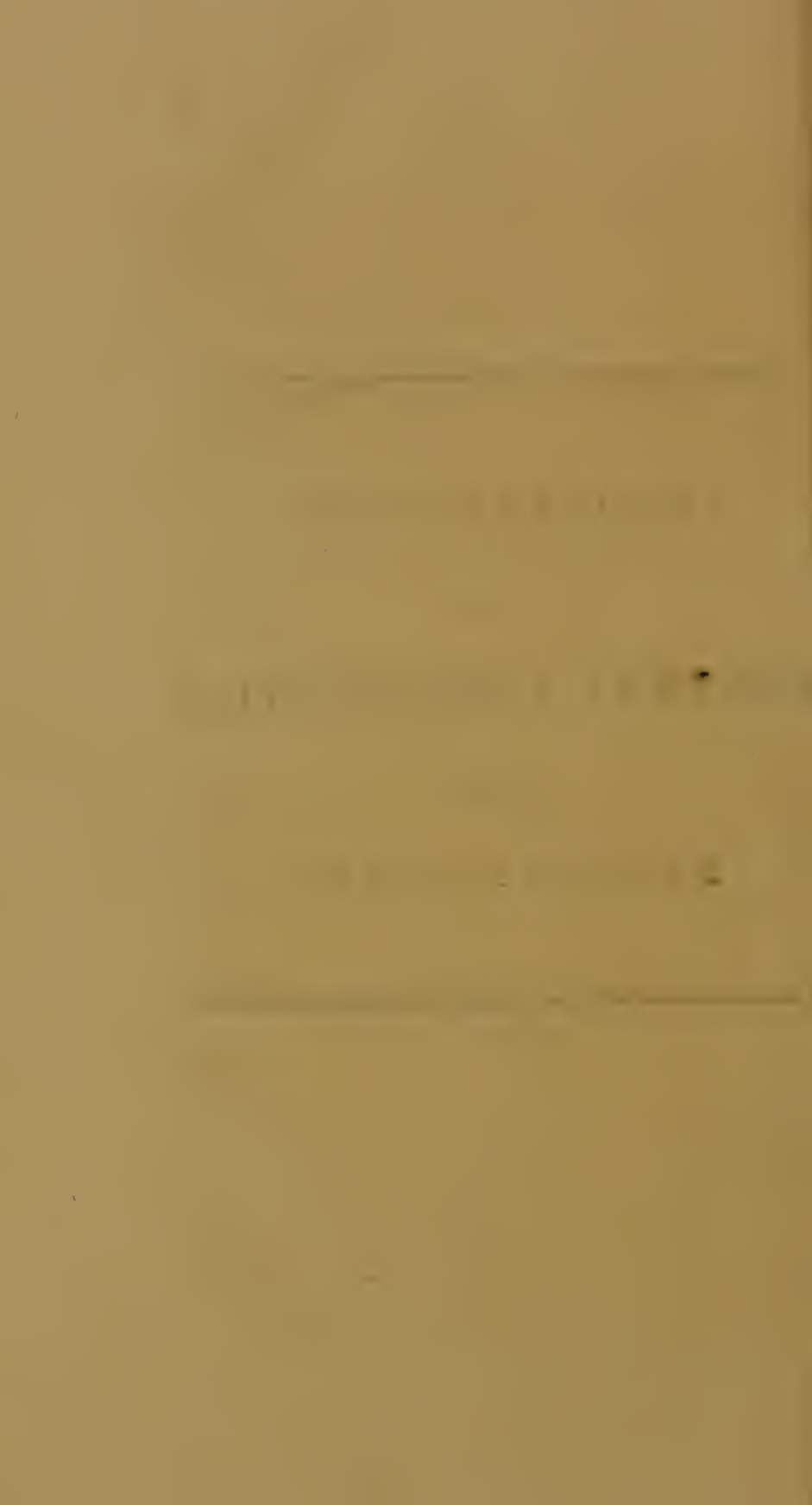
ON

GENERAL THERAPEUTICS,

OR THE

METHODUS MEDENDI.

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*Heads of Lectures on General Therapeutics,  
or the Methodus Medendi.*

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INTRODUCTION.

**D**EFINITION of this branch of the institutions of medicine—its connexion with pathological physiology—with the practice of physic strictly so called—with the materia medica—Circumstances in which it differs from these.

View of indications in the cure of diseases to be afforded by therapeutics—Observations on the nature of indications—Explanation of the terms *indicans*, *indicatio*, and *indicatum*—Observations on the kinds of indications mentioned by medical writers—conservatory—preservatory—

ry—curative—palliative—Rules in forming indications—regard to the method of nature—to age, sex, temperament, and idiosyncrasy—to times and circumstances of disease,—to what experience has shewn to be healthful or hurtful.

Observations on the different plans followed in considering the *methodus medendi*—Objections to a general systematic arrangement—illustrations of these objections from Dr Cullen's arrangement, according to curative indications—Advantage of arranging the articles of the *methodus medendi* under natural associations or independent classes—multiplicity of classes of this kind from the earliest periods of medicine—reasons for rejecting many of these—for selecting twenty-four classes, afterwards to be considered.

Plan to be followed in treating of each class—Observations on the nature of the class—a definition of the class—its primary or direct effects—the changes induced from these, or its secondary effects—the different orders into which it may be divided—Observations on the use of the class

class—indications of cure deduced from its nature—circumstances influencing the choice of orders—Cautions to be attended to in the employment of the class—contra-indications to its use.



## I. EMETICS.

**G**ENERAL properties characterizing emetics—Primary effects resulting from their employment—they excite nausea—they produce the action of vomiting—they occasion sudden and opposite changes in the circulation—they increase the secretion or discharge of secreted matter, from the various glands and other secretory organs which prepare fluids to be deposited in the upper part of the alimentary canal—Changes in the system from the primary effects of emetics—the evacuation of the stomach, and in some degree of the upper part of the intestinal canal—free circulation through the stomach, intestines

and glands connected with these organs—general agitation of the body—commotion of the nervous system—a particular affection of the surface.

Different orders of emetics—*Emetica irritantia*—*E. calefacientia*—*E. nauseosa*—*E. narcotica*.

Indications in the cure of diseases which emetics are fitted to fulfil.

1. From the general agitation of the system which they produce,

To restore uniform circulation,

To promote lymphatic absorption when diminished,

To remove obstructions in the sanguiferous system.

2. From the evacuation which they occasion by vomiting,

To discharge noxious matter taken in by the mouth,

To discharge morbid accumulations of secreted matter lodged in the stomach,

To evacuate ferous accumulations.

3. From

3. From the affection of the nervous system which they occasion,

To restore excitement to the nervous power,

To obviate inordinate affections of the nervous energy.

Illustrations of these indications from remarks on the use of emetics in particular diseases—fever—dysentery—phthisis—jaundice—dropfy—poisons.

Circumstances to be attended to respecting the choice of particular orders for fulfilling particular indications.

Circumstances suggesting caution in the employment of emetics deduced from the nature of the class—agitation of the system—increased celerity of the pulse—Conditions of the system suggesting caution in their employment—infancy—old age—pregnancy—delicacy of habit—a plethoric state—Cautions with respect to regimen during the administration of emetics—

tics—The state of the stomach when the emetic is exhibited—The means of facilitating the operation of the emetic—The time of exhibition—The temperature in which the patient ought to be kept after the operation of the emetic is finished.

Circumstances contra-indicating the employment of emetics—rupture or relaxation of containing vessels—topical inflammation of viscera—a high degree of debility in internal parts—fixed obstructions to the circulation.

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## II. CATHARTICS.

**G**ENERAL characteristics of cathartics —Primary effects resulting from the employment of them—they stimulate the intestinal canal—they increase the peristaltic motion of the intestines—they promote the secretion of those fluids which, for the purposes of the economy, are requisite in  
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the intestinal canal—they produce more frequent and looser stools.

Changes in the system from the primary effects of cathartics—the evacuation of the contents of the intestines—a diminution of the quantity of circulating fluids, and in a particular manner of the serosity—a change in the balance of circulation—a diminution of perspiration—higher mobility in the system in general, but more especially in the intestinal canal.

Different orders of cathartics—*Cathartica stimulantia*—*C. refrigerantia*—*C. adstringentia*—*C. emollientia*—*C. narcotica*.

Indications in the cure of diseases which cathartics are capable of fulfilling.

1. From the evacuation which they produce,

To obviate morbid retention of the contents of the intestines,

To diminish the quantity of circulating fluids, when too great for the state of the system at the time,

To



To evacuate morbid accumulations of serum.

2. From altering the balance of circulation,

To promote free circulation through the intestines when morbidly impeded,  
To diminish the impetus of blood against parts morbidly affected.

3. From the affection of the nervous system which they occasion,

To remove a state of torpor in the muscular fibres of the intestines,  
To restrain inordinate motions of the muscular fibres there.

Illustration of these indications from remarks on the use of cathartics in particular diseases—dysentery—variola—hydrops—amenorrhœa—diarrhœa.

Circumstances to be attended to respecting the choice of orders for fulfilling particular indications.

Circumstances suggesting cautions in the employment of cathartics, derived from the

the nature of the class—The degree of evacuation which they produce—the topical irritation which they occasion to the intestines themselves—Conditions of the system suggesting caution in the employment of them—childhood—female habits—hysterical constitutions—high degrees of irritability and torpor—remarkable delicacy of the stomach—peculiar antipathies.

Cautions with respect to regimen during the administration of cathartics—the mode of exhibiting the cathartic—the temperature in which the patient is to be kept during its operation—the diet to be employed—the degree of exercise to be used.

Circumstances contra-indicating the employment of particular orders of cathartics—general inanition—a high degree of irritability in the intestines—circulation morbidly accelerated—circulation uncommonly languid—habitual costiveness—uncommon relaxation of the intestines.

### III. DIAPHORETICS.

**G**ENERAL properties characterizing diaphoretics—Primary effects resulting from the employment of them—they accelerate the motion of the blood—they produce free circulation through the vessels on the surface—they excite a discharge of sweat.

Changes in the system from the primary effects of diaphoretics—an alteration in the balance of circulation—a diminution of the quantity of circulating fluids—a diminution more particularly of the serosity.

Different orders of diaphoretics—*Diaphoretica calefacientia* — *D. pungentia* — *D. stimulantia* — *D. antispasmodica* — *D. diluentia*.

Indications in the cure of diseases which diaphoretics are capable of fulfilling.

I. From changing the mode of circulation,

To

To obviate morbid determinations to different viscera,

To remove various causes obstructing or impeding circulation on the surface,

To restore the natural discharge which should take place by the surface.

2. From producing evacuation,

To diminish the quantity of circulating fluids, when too great for the state of the system at the time,

To restore lymphatic absorption when morbidly diminished,

To discharge morbid accumulations of serum.

Illustration of these indications from remarks on the use of diaphoretics in particular diseases — fever — rheumatism — dropsy — herpetic affections.

Circumstances claiming attention in the choice of orders for fulfilling particular indications.

Circumstances suggesting caution in the employment of diaphoretics, derived from  
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the nature of the class—The determination which they produce to the surface—the acceleration of the motion of the blood which they occasion—the debility which is the consequence of a profuse discharge of sweat—the effects produced on the vessels of the surface by the free passage of blood through them.

Conditions of the system suggesting cautions in the employment of diaphoretics — infancy—lax and debilitated habits — Constitutions liable to costiveness — Constitutions not easily acted upon by diaphoretics.

Cautions with respect to regimen during the administration of diaphoretics—the use of liquids—the temperature in which the patient is to be kept—The means of promoting sweating adapted to particular constitutions.

Circumstances contra-indicating the employment of diaphoretics—a morbid increase of determination to the surface—uncommon relaxation of the system—a high degree of inanition—a morbid diminution

nation of the impetus of the blood at the brain.



#### IV. EPISPASTICS.

**G**ENERAL properties characterizing epispastics—Primary effects resulting from the employment of epispastics—they excite pain—they increase the quantity of fluids circulating through the part to which they are applied—they produce a discharge under the form of serosity—they produce a discharge of pus.

Changes in the system from the primary effects of epispastics—Attention to the sensation of pain excited—an increase of excitement in the nervous energy through the system in general—an uncommon determination of blood to the part acted upon—a diminution of the quantity of blood passing through the bloodvessels in the neighbourhood of those in which the flow is increased—a permanent change in the mode of circulation—a diminution of the

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quantity

quantity of circulating fluids—a diminution more particularly of the ferrous part of the blood.

Different orders of epispastics—*Epispastica rubefacientia*—*E. vesicantia*—*E. suppurantia*.

Indications in the cure of diseases which epispastics are fitted to fulfil.

I. From their action on the nervous system,

To diminish violent pain,

To take off the effects of uncommon sensibility,

To remove torpor.

2. From the alteration which they produce in the balance of circulation,

To diminish the impetus of the blood against parts morbidly affected,

To remove a morbid increase of action in vessels in the neighbourhood of those to which they are applied.

3. From



3. From the evacuation which they produce,

To diminish the quantity of circulating fluids, when too great for the state of the system at the time,

To evacuate morbid accumulations of serum.

Illustrations of these indications from remarks on the use of epispastics in particular diseases—odontalgia—hæmorrhagia—apoplexia—hepatitis—hydrocephalus.

Circumstances claiming attention in the choice of orders for fulfilling particular indications.

Circumstances suggesting caution in the employment of epispastics from the nature of the class—the pain which is occasioned by their action—the inflammation they excite in the part to which they have been applied—the strangury which is a frequent attendant of their operation.

Conditions of the system suggesting caution in the employment of epispastics—the female habit during the menstrual flux—lax and debilitated habits.

Cautions with respect to regimen during the administration of epispastics—the accommodation of diet and temperature to the disease of the patient—the use of demulcents and diluents—the length of time for which the epispastica vesicantia should be applied—the treatment of the part after their removal—the continuance of the epispastica suppurantia.

Circumstances contra-indicating the employment of epispastics—a high degree of irritability in the system in general—morbid spissitude of the blood—a state of general inanition.

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## V. DIURETICS.

**G**ENERAL properties characterizing diuretics—Primary effects resulting from the employment of them—they promote the secretion of urine—they promote the excretion of urine.

Changes

Changes in the system from the primary effects of diuretics—a change in the balance of circulation — a diminution of the quantity of circulating fluids, but especially of serosity and saline matter—an increase of absorption by the lymphatics—a diminution of perspiration—an increased flow of liquid through the urinary passages.

Different orders of diuretics—*Diuretica stimulantia*—*D. refrigerantia*—*D. diluentia*—*D. narcotica*.

Indications in the cure of diseases which diuretics are fitted to fulfil.

1. From the evacuation which they produce,

To remove superabundant serosity from the blood,

To evacuate morbid accumulations of serum,

To remove morbid acrimony from the blood,

To diminish the quantity of circulating  
G 3 fluids,

fluids, when too great for the state of the system at the time.

2. From the alteration which they occasion in the balance of circulation,

To restore the natural secretion of urine when morbidly diminished,

To diminish other secretions when morbidly augmented.

3. From augmentation of the flow of liquid through the urinary passages,

To remove obstructions in the urinary passages,

To wash out acrimony from the urinary passages.

Illustrations of these indications from remarks on the use of diuretics in particular diseases—ascites—icterus—nephritis.

Circumstances to be attended to respecting the choice of orders for fulfilling particular indications.

Circumstances from the nature of the class suggesting caution in the employment

ment of diuretics—sudden evacuation—changes in the secretion by the kidney—flow of liquid through the urinary passages.

Conditions of the system suggesting caution in the employment of diuretics—the state of the discharge by urine previous to the use of them—peculiarities in the habit affecting their operation.

Cautions respecting regimen during the operation of diuretics—use of liquids—temperarure—diet.

Circumstances contra-indicating the employment of certain diuretics—a high degree of morbid sensibility in the kidney—a morbid increase of the secretion of urine—fixed obstructions in the urinary passages—deficiency of serosity in the blood—redundance of serosity in the blood.

## VI. EXPECTORANTS.

**G**ENERAL properties characterizing expectorants—Primary effects resulting from the employment of expectorants—they stimulate the lungs—they augment the secretion taking place by the mucous glands of the lungs—they increase the excretion of mucus from the lungs.

Changes in the system from the primary effects of expectorants—an alteration in the state of the mucus excreted—an increase of the sensibility of the lungs—free circulation through the bloodvessels of the secreting organs—evacuation of those cavities in the lungs in which mucus is deposited.

Different orders of expectorants—*Expectorantia nauseosa*—*E. stimulantia*—*E. antispasmodica*—*E. irritantia*.

Indications in the cure of diseases which expectorants are fitted to fulfil.

I. From

1. From affecting the secretion of mucus,

To promote the secretion by the lungs  
when morbidly diminished,

To render the mucus thinner when morbidly thick and viscid.

2. From affecting the excretion of mucus,

To evacuate morbid accumulations of  
mucus in the lungs,

To supply irritation to the lungs when  
morbidly deficient.

3. From affecting the state of the lungs  
themselves,

To remove morbid insensibility in the  
lungs,

To promote free circulation through the  
lungs when morbidly impeded there.

Illustration of these indications from remarks on the use of expectorants in particular diseases—catarrh—peripneumony.

Circumstances claiming attention in the  
choice



choice of different orders of expectorants for fulfilling particular indications.

Circumstances suggesting cautions in the employment of expectorants derived from the nature of the class—the nausea they excite—their effect in accelerating circulation—their influence as irritating the lungs.

Conditions of the system suggesting cautions in the employment of expectorants—the state of irritability in the lungs—the period of life.

Cautions with respect to regimen during the use of expectorants—the employment of diet favouring expectoration—exercise—dry and pure air.

Circumstances contra-indicating the employment of expectorants—a high degree of increased sensibility in the lungs—uncommonly quick expectoration of mucus from the lungs.

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## VII. ERRHINES.

**G**ENERAL properties characterizing errhines—Primary effects resulting from the employment of them—they produce a sense of titillation in the nose—they excite the action of sneezing—they occasion the expulsion of secreted mucus from different cavities into which it is deposited—they augment the secretion of mucus from the glands separating it in the cavity of the nose.

Changes resulting from the primary effects of errhines—violent agitation of the body in general—commotion of the nervous system—sudden changes in the circulation—a diminution of the quantity of circulating fluids—more free circulation through the mucous glands on which the sternutatory acts—a change in the balance of circulation between the nose and neighbouring parts.

Different

Different orders of errhines — *Errhina sternutatoria* — *E. evacuantia*.

Indications in the cure of diseases which errhines are fitted to fulfil.

1. From the agitation of the system which they produce,

To discharge morbid accumulations of mucus from the cavities surrounding the nose,

To remove a state of torpor in the nervous system,

To obviate nervous affections of the convulsive and spasmodic kind.

2. From the determination which they produce to the nose,

To promote the secretion of mucus in the nose, when morbidly diminished,

To occasion derivation from parts morbidly affected in the neighbourhood of the nose.

Illustration

Illustration of these indications from remarks on the use of errhines in particular diseases—palsy—headach—ophthalmia.

Circumstances to be attended to in the choice of orders.

Circumstances suggesting caution in the employment of errhines, derived from the nature of the class—the agitation of the system which they produce—the change in determination which they occasion.

Conditions of the system suggesting caution in the employment of errhines—old age—irritability of habit—disposition to hæmorrhage—a torpid state—former habits.

Cautions with respect to regimen during the administration of errhines—means of obviating inflammation when excited—influence of sudden exposure to cold.

Circumstances contra-indicating the employment of errhines—a high degree of plethora—uncommon sensibility of the nose—preternatural determination to the nose—ulceration of the nose, or neighbouring parts.

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### VIII. SIALAGOGUES.

**D**EFINITION—Primary effects — they stimulate the salivary glands or their excretories, and increase the action of the vessels secreting saliva — they accelerate circulation through the salivary glands, and through bloodvessels in the neighbourhood of these—they produce a preternatural discharge of saliva.

Changes resulting from the primary effects of sialagogues—an alteration of the distribution of fluids circulating through the vessels to which the action of the sialagogue extends, and through the vessels in the neighbourhood of these—a diminution of the quantity of circulating fluids—a change in the nature of the remaining mass, independently of the diminution of quantity.

Different orders of sialagogues—*Sialogoga topica*.—*S. interna*.

Indications

Indications in the cure of diseases which sialagogues are fitted to fulfil.

1. From the alteration which they induce in the balance of circulation,

To diminish the impetus of the blood against parts morbidly affected in the neighbourhood of the salivary glands,

To diminish morbidly increased action in these neighbouring vessels,

To promote free circulation through the salivary glands when morbidly obstructed.

2. From the evacuation which they occasion,

To discharge morbid accumulations of serum,

To produce a change in the fluids when morbidly vitiated.

Illustration of these indications from remarks on the use of sialagogues in particular diseases — toothach — cynanche — dropfy — syphilis.

Circumstances

Circumstances influencing the choice of different orders of sialagogues for fulfilling particular indications.

Circumstances suggesting caution in the employment of sialagogues, deduced from the nature of the class—their influence in stimulating the salivary glands and neighbouring parts—the time required for their action—the influence of their action on other parts—the debility which they induce.

Conditions of the system suggesting caution in the employment of them—old age—constitutions habituated to topical sialagogues—peculiarities in constitution determining the operation of internal sialagogues to other parts—the menstrual discharge—pregnancy.

Cautions with respect to regimen during the use of sialagogues—the preservation of moderate temperature—mild diet—the free use of diluents—the use of different gargarisms—the use of moderate exercise.

Circumstances contra-indicating the employment of sialagogues—uncommon determination to the salivary glands—preternatural



ternatural sensibility of these glands—deficiency of serosity in the circulating fluids—a high degree of inanition—general debility of the system.

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## IX. BLOOD-LETTING.

**M**ODES of cure to be comprehended under the title of blood-letting—Primary effects arising from these—they remove part of the circulating fluids—they produce a temporary increase of the celerity of the pulse—they diminish animal heat—they change the distribution of blood in the system.

Changes in the system from the primary effects of blood-letting—a diminution of the quantity of the blood, and of the tension of the bloodvessels—a diminution of the celerity and impetus of the blood through the system in general—a diminution more particularly of impetus in parts in the  
H                      neighbourhood

neighbourhood of those from which the discharge is made—a diminution of the quantity of fluids separated by different secretory organs.

Division of the different modes of blood-letting—*General*—*Topical*.

Indications in the cure of diseases which blood-letting is fitted to fulfil.

1. From the abstraction of blood,

To diminish the quantity of circulating fluids, when too great for the state of the system at the time,

To take off morbid tension in the sanguiferous system.

2. From altering the state of motion in the blood,

To lessen the impetus of circulation when morbidly affected.

To moderate morbid heat.

3. From altering the course of the blood,

To

To diminish action morbidly increased  
in particular vessels,

To lessen the impetus of the blood  
against parts morbidly affected.

Illustration of these indications from  
the use of blood-letting in particular diseases.

Circumstance to be attended to respecting  
the choice of different modes of blood-  
letting, as accommodated to particular indications.

Circumstances from the nature of blood-  
letting suggesting cautions in the employment  
of it—the state of the pulse during  
the discharge—the quantity of blood discharged—the  
appearance of the blood when discharged—the effect  
of the discharge as inducing deliquium.

Conditions of the system suggesting  
cautions in the employment of blood-letting—  
certain periods of life—particular urgent  
symptoms where blood-letting is adverse to  
the nature of the disease—the time of critical  
discharges—high degrees of irritability and  
torpor.

Cautions regarding regimen where blood-letting is employed—diet—time of performing the operation—mode of discharge.

Circumstances contra-indicating blood-letting—general inanition of the system—the circulation remarkably weak and languid—a high degree of debility.



## X. EMMENAGOGUES.

**M**ODES of cure to be considered under the title of emmenagogues—Primary effects resulting from them—they stimulate the circulating system—they more particularly stimulate the vessels in the neighbourhood of the uterus, an effect in some degree communicated to the vessels of the uterus themselves—they occasion a particular affection of the nervous system.

Changes in the system from the primary effects of emmenagogues—an increase of  
the

the momentum of the blood through the uterus and neighbouring parts—an augmentation of the quantity of blood determined to the uterus—a change in the tonic power of the vessels of the uterus.

Different orders of emmenagogues—*Emmenagoga stimulantia*—*E. irritantia*—*E. tonica*.—*E. antispasmodica*.

Indications deduced from the nature of the class, by operating in fulfilling which they remove amenorrhœa.

1. From changing the mode of circulation,

To promote free circulation in the neighbourhood of the uterus, when morbidly obstructed there,

To promote that accumulation of blood in the uterine vessels which is necessary for the menstrual discharge,

To remove morbid obstruction to the passage of blood into the cavity of the uterus.

2. From their influence as acting on the state of the animated solid,

To increase the tonic power of the system when morbidly diminished,

To increase tonic power in the vessels of the uterus in particular, when morbidly deficient,

To remove spasmodic stricture taking place on the vessels of the uterus.

Circumstances to be attended to respecting the choice of orders for fulfilling particular indications.

Circumstances suggesting caution in the employment of emmenagogues, deduced from the nature of the class—the consequences of restoration if pushed too far—the irritation occasioned to the intestines—the stimulus to the system in general.

Conditions of the system suggesting caution in the employment of emmenagogues—the age of the patient—former complaints to which she may have been liable—the duration of the present complaints.

Cautions

Cautions with respect to regimen during the use of emmenagogues—temperature—exercise—diet.

Contra-indications to emmenagogues—Conditions contra-indicating the whole class—a high degree of inanition—particular topical affections of the uterus—a particular period of life—morbid conditions contra-indicating particular orders.

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## XI. ANTHELMINTICS.

**G**ENERAL properties characterizing this association—Effects resulting from their use, particularly those exerted on the worms themselves—they kill worms to which they come to be applied in the body—they expel worms from the body—they prevent the generation of worms in the body—Changes resulting from these effects.



Different orders of anthelmintics—*An-*  
*thelmintica venenosa*—*A. lubricantia*—*A. to-*  
*nica*—*A. cathartica*.

Indications in the cure of diseases which  
 anthelmintics are fitted to fulfil.

1. From acting on the worms themselves,  
 To kill worms lodged in different parts  
 of the human body.

2. From their action on the system in  
 which the worms are lodged,

To promote the expulsion of worms  
 from the body, whether dead or a-  
 live,

To prevent the generation of worms in  
 the body.

Circumstances to be attended to respect-  
 ing the choice of orders for fulfilling par-  
 ticular indications.

Circumstances suggesting caution in the  
 employment of anthelmintics—effects in-  
 dependent of their action as anthelmintics  
 —immunity—diet—exercise.

Circumstances

Circumstances contra-indicating the employment of particular orders of anthelmintics.

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## XII. LITHONTRIPTICS.

GENERAL properties characterizing the articles to be treated off under the title of lithontriptics—Primary effects of these articles—they destroy acid contained in the stomach—they brace the muscular fibres of the primæ viæ—they produce an analogous effect on other moving solids.

Changes resulting from these effects—an alteration in the state of the circulating fluids, as a pabulum for the secretion of urine—an alteration on the state of secretion at the kidney.

Different orders of lithontriptics—*Lithontriptica antacida*—*L. adstringentia*.

Indications which lithontriptics are fitted to fulfil.

I. From

1. From altering the state of the solids,

To obviate particular morbid laxity in the stomach,

To obviate particular morbid laxity in the kidney.

2. From altering the state of the fluids,

To correct a peculiar morbid state in the pabulum furnished for the secretion of urine.

Circumstances to be attended to respecting the choice of orders for fulfilling particular indications.

Circumstances suggesting caution in the employment of lithontriptics.

Circumstances contra-indicating the employment of particular lithontriptics—influence of alkali in its caustic state on the system—consequences when the operation of lithotomy is performed after the long-continued use of it.

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### XIII. ANTACIDS.

**G**ENERAL properties characterizing antacids—Effects in destroying acid in the alimentary canal—consequences resulting from thence.

Different orders of antacids—*Antacida eccoprotica*—*A. restringentia*.

Indications which they are fitted to fulfil, as destroying acid in the primæ viæ,

To remove a sensation of sourness in the stomach,

To restore the natural appetite when morbidly vitiated by acid in the stomach,

To restore the natural action of the alimentary canal when disordered from the presence of acid.

Illustration of these indications from their use in different diseases.

Circumstances

Circumstances suggesting cautions in the employment of antacids.

Circumstances contra-indicating the employment of antacids—alkalescency in the primæ viæ—a tendency to putrescency in the system.



#### XIV. ANTALKALINES.

**G**ENERAL properties characterizing antalkalines — Effects of neutralizing alkali in the system—changes resulting from thence.

Different orders of antalkalines—*Antalkalina vegetabilia*—*A. salina*.

Indications which they are fitted to fulfil, as destroying alkali.

To remove uneasiness from alkalescency in the primæ viæ,

To restore the natural disposition to acidity in the stomach,

To correct preternatural putrescency in the alimentary canal.

Illustration

Illustration of these indications from their use in different diseases.

Circumstances suggesting caution in the employment of antalkalines.

Circumstances contra-indicating their employment—a constitutional disposition to cardialgia on the use of acids—circulation uncommonly slow and languid—uncommon diminution of animal heat.

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## XV. ATTENUANTS.

**D**EFINITION of attenuants—Primary effects of articles referred to this class—they dilute the contents of the primæ viæ—they add an uncommon quantity of serous matter to the blood—they increase the solvent power of the serosity—they render the consistence of the general mass more fluid than it was previous to their use.

Changes arising from the primary effects of attenuants—free circulation through the smaller bloodvessels—an increase of various

various serous secretions—an increase of effusion into various cavities.

Different orders of attenuants—*Attenuantia diluentia*—*A. solventia*.

Indications in the cure of diseases which attenuants are fitted to fulfil.

1. From altering the state of the blood itself,

To counteract morbid viscosity in the circulating mass,

To restore free circulation when morbidly obstructed in the extreme vessels.

2. From affecting the secretions,

To increase the quantity of the serous secretions when morbidly deficient,

To render the serous secretions more fluid when morbidly viscid.

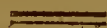
Circumstances to be attended to respecting the choice of orders of attenuants.

Circumstances suggesting caution in their use.

Circumstances



Circumstances contra-indicating their employment—preternatural tenuity of the general mass of circulating fluids—a tendency to morbid accumulations of serosity in the system—a remarkable increase of serous secretions.



## XVI. INSPISSANTS.

**D**EFINITION of inspissants—Effects in the system—Different orders into which they may be divided—*Inspissantia farinosa*—*I. mucilaginoso*—Influence of the discharge of serosity as producing inspissation.

Indications in the cure of diseases which inspissants are fitted to fulfil.

1. From their influence on the state of the blood itself,

To remove morbid tenuity from the common mass of circulating fluids,

To prevent the transmission of red blood  
through

through vessels not naturally fitted to receive it.

2. From their influence on the state of the secretions,

To diminish the quantity of serous secretions when morbidly augmented,

To render those secretions more viscid when morbidly thin and acrimonious.

Circumstances contra-indicating the employment of inspissants—morbid viscosity of the blood—preternatural diminution of serous secretions—peculiar debility in the organs of digestion.



## XVII. ANTISEPTICS.

**G**ENERAL properties characterizing antiseptics—Effects resulting from the employment of them—they change the appearance of putrescent parts in the living animal body—they render the texture

ture of the part more firm and compact—they alter the matter discharged to a more thick consistence and whiter colour—they remove a strong fetid smell arising from the part before their use.

Different orders of antiseptics—*Antiseptica tonica*—*A. refrigerantia*—*A. stimulantia*—*A. antispasmodica*.

Indications in the cure of diseases which antiseptics are fitted to fulfil.

1. From their influence as preventing putrefaction,

To supply an antiseptic power when morbidly deficient in the system,

To obviate the assimilating quality of any putrescent ferment when introduced into the body.

2. From their influence as obviating putrefaction when already begun,

To correct a putrid diathesis in the fluids of the living animal body,

To prevent the farther progress of putrefaction

trefaction when taking place in the solids,

To restore to a sound state parts already morbidly putrid.

Illustration of these indications from the use of antiseptics in particular diseases—gangrene—scurbutus—typhus.

Circumstances to be attended to respecting the choice of orders for fulfilling particular indications.

Cautions to be observed in the employment of antiseptics.

Circumstances contra-indicating the employment of them.



## XVIII. ASTRINGENTS.

**G**ENERAL properties characterizing astringents—Primary effects resulting from the employment of them—they excite a peculiar sensation referred to the parts on which they more immediately act—they produce a remarkable corrugation  
tion

tion of these parts—they produce an affection through the rest of the system in some degree similar to that in the parts to which they are applied—they produce a condensation of the dead animal fibre.

Changes in the system from the primary effects of astringents—an increase of cohesion in various parts—an increase of tonic power—a diminution of the capacity of containing vessels—a diminution of the irritability, and in some degree also of the sensibility, of the parts on which they act.

Different orders of astringents—*Adstringentia styptica*—*A. corrugantia*—*A. tonica*.

Indications in the cure of diseases which astringents are fitted to fulfil.

1. From altering the condition of the moving solids,

To obviate original delicacy,

To restore natural compactness to parts morbidly relaxed,

To restore diminished tonic power,

To diminish irritability when morbidly increased.

2. From altering the state of containing vessels,

To diminish secretions when morbidly augmented,

To increase the power of the sphincters as retaining excrementitious matters,

To produce a constriction of the orifices of ruptured vessels.

Circumstances claiming attention in the choice of orders for fulfilling particular indications—Circumstances suggesting cautions in the employment of astringents—Circumstances contra-indicating the use of them—a high degree of rigidity—peculiar insensibility in the moving fibres—morbid diminution of excretions.

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## XIX. EMOLLIENTS.

**G**ENERAL properties characterizing emollients—Primary effects resulting from the employment of them—they render



der the part to which they are applied more soft and flexible than before—they excite a peculiar sensation indistinctly referred to the part to which they are applied—they produce in some degree the same effect through the rest of the system as takes place in the part on which they immediately act.

Changes in the system from the primary effects of emollients—a diminution of the power of cohesion in various parts of the animal body—a diminution of tonic power in the system—an increase of the capacity of vessels in the part more particularly acted upon, and in some degree in the system in general—an increase of irritability and sensibility through the system.

Different orders of emollients—*Emollientia humectantia*—*E. laxantia*—*E. lubricantia*—*E. atonica*.

Indications in the cure of diseases which emollients are fitted to fulfil.

- I. From their influence in producing a  

I 3
change



change on the solids, connected with voluntary motion,

To restore the natural flexibility to parts morbidly rigid,

To diminish a morbid increase of tonic power.

2. From their influence in producing a change in containing vessels,

To obviate the effects of morbid tension of parts,

To remove morbid obstruction, particularly in the small vessels of the sanguiferous system.

Circumstances claiming attention respecting the choice of orders for fulfilling particular indications.

Circumstances suggesting caution in the employment of emollients.

Circumstances contra-indicating the employment of emollients—a high degree of morbid laxity in the vessels—a peculiar sensibility in the moving fibres.

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 XX. CORROSIVES.

**G**ENERAL properties characterizing corrosives—Primary effects resulting from the employment of corrosives—they excite a sensation of pain referred to the part acted upon—they destroy the texture of parts, and occasion a separation of the diseased from the sound part—they lay open vessels which formerly passed into the part destroyed.

Changes in the system from the primary effects of corrosives—a state of insensibility in the part acted upon—a diminution of particular solids on which they more especially act—a discharge, particularly of purulent matter from the vessels laid open.

Different orders of corrosives—*Corrosiva erodentia*—*C. caustica*.

Indications in the cure of diseases which corrosives are fitted to fulfil.

1. From inducing a state of insensibility in the parts to which they are applied,  
To remove morbid sensibility in the nerves of particular parts,  
To facilitate and render effectual openings into particular lodgments of matter.
2. From producing a diminution or destruction of parts,  
To remove morbid excrescences or indurations.
3. From producing a discharge of purulent matter,  
To facilitate the healing of ulcers,  
To begin and facilitate the action of the *epispastica suppurantia*.

Circumstances contra-indicating the use of corrosives—a peculiar state of irritability in the system—a high degree of putrescent tendency—a cancerous disposition in the parts to be acted upon.

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XXI. DEMULCENTS.

**G**ENERAL properties characterizing demulcents—Primary effects resulting from the employment of demulcents—they lubricate and sheathe those parts to which they are topically applied in the animal body—they exert, after entering the circulation, the same effect at different excretories at which they are collected—they diminish the activity of different stimuli with which they happen to be conjoined in the body.

Changes in the system from the primary effects of demulcents—a diminution of the facility of action on sensible parts of the body—a diminution of the force of the acting power by which these parts may be affected.

Different orders of demulcents—*Demulcentia lenientia*—*D. diluentia*.

Indications in the cure of diseases which demulcents are fitted to fulfil.

I. From

1. From their action on sensible solids,

To diminish the action of ordinary stimuli upon parts affected with morbid sensibility,

To obviate morbid deficiency in the natural coverings of parts,

To prevent the action of morbid stimuli.

2. From their action on stimulating fluids,

To diminish morbid acrimony in the system in general,

To render more mild, secretions in a morbidly acrid state.

Circumstances contra-indicating the employment of demulcents—preternatural deficiency of acrimony in the secreted fluids—a high degree of morbid viscosity in the coverings of sensible parts—an uncommon want of sensibility in excretory organs.

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## XXII. STIMULANTS.

**G**ENERAL properties characterizing stimulants—Latitude in which the term has been taken by medical writers—necessity of limitation for forming a natural association.

Primary effects resulting from the employment of stimulants—they produce a particular sensation in the part acted upon—they increase the action of the muscular fibres in the part, especially in its vessels—they increase the energy of the sensorium—they increase nervous energy in the moving fibres through the system in general.

Changes in the system from the primary effects of stimulants—acceleration of the motion of the blood in the part to which they are immediately applied—an increase of the impetus of circulation through the system in general—a higher degree



degree of excitement in the powers of sensation—augmentation of mobility and vigour in the muscular fibres through the system in general.

Different orders of stimulants—*Stimulantia topica*—*S. diffusibilia*—*S. cardiaca*—*S. calefacientia*—*S. tonica*—*S. carminativa*,

Indications in the cure of diseases which stimulants are fitted to fulfil.

1. From affecting the circulation,

To facilitate the passage of blood through parts in which it is morbidly obstructed,

To augment the force and celerity of circulation, when morbidly slow and weak.

2. From affecting the powers of sensation,

To quicken the external senses when morbidly torpid,

To rouse the mental faculties when in a lethargic state,

To exhilarate a despondent condition.

3. From affecting the moving fibres,

To



To restore the power of motion when  
morbidly deficient,  
To increase the strength of motion when  
morbidly weak.

Circumstances to be attended to respecting the choice of orders for fulfilling these indications—Circumstances suggesting cautions in the employment of stimulants.

Circumstances contra-indicating the employment of certain stimulants—a high degree of morbid irritability—the circulation uncommonly accelerated—an uncommon disposition to hemorrhage.



### XXIII. SEDATIVES.

**G**ENERAL properties characterizing sedative medicines—Primary effects of sedatives—they diminish the sensibility of the part on which they immediately act—they diminish the force of action and tonic power in the muscular fibres of the part acted upon—they produce a peculiar sensation in the system in general—they diminish the energy of the sensorium.

Changes

Changes taking place in the system from the primary effects of sedatives—retardation of the motion of the blood in the part immediately acted upon—diminution of the momentum of the blood in the system in general—diminution of quickness in the powers of sensation, judgment, memory, and other intellectual faculties—a diminution of vigour and of correctness in the action of voluntary muscles through the system in general.

Different orders of sedatives—*Sedativa soporifica*—*S. refrigerantia*—*S. narcotica*.

Indications in the cure of diseases which sedatives are fitted to fulfil.

1. From affecting the condition of circulation,

To diminish the force and celerity of the blood's motion, when morbidly augmented,

To diminish the impetus of the blood against parts morbidly affected, whether the impetus be morbidly augmented or not.

2. From

2. From affecting the powers of sensation,  
To abate violent pain,  
To procure sleep in cases of preternatural watchfulness.

3. From affecting the action of muscular fibres,

To restrain inordinate motions,  
To moderate excessive evacuations.

Circumstances claiming attention with respect to the choice of orders for fulfilling particular indications—Circumstances suggesting caution in the employment of different sedatives—Circumstances contra-indicating the employment of certain sedatives—circulation particularly languid—a remarkably lethargic disposition—a high degree of torpor in the system.

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#### XXIV. ANTISPASMODICS.

GENERAL properties characterizing the class of antispasmodics—Principles on which they seem to operate as allaying inordinate action.

Different

Different orders of antispasmodics—*Antispasmodica stimulantia* — *A. sedativa* — *A. tonica*.

Indications in the cure of diseases which antispasmodics are fitted to fulfil.

To remove fixed spasmodic contraction  
in different muscles,

To allay convulsive agitations,

To prevent the return of such morbid  
states when the system is habitually  
liable to them.

Circumstances claiming attention in the  
choice of different orders of antispasmo-  
dics for fulfilling particular indications—  
Circumstances suggesting cautions in the  
employment of antispasmodics—Circum-  
stances contra-indicating the employment  
of particular antispasmodics.

THE END.

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HEADS OF LECTURES

ON

JURIDICAL MEDICINE,

OR THE

*INSTITUTIONES MEDICINÆ FORENSIS.*

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## P R E F A C E.

**M**ANY questions come before courts of justice, where the opinion of a medical practitioner is necessary, either for the exculpation of innocence, or the detection of guilt. In many cases, on his judgment, questions respecting the life, the liberty, and property of individuals must be determined by the civil magistrate; and not unfrequently, his advice becomes requisite for authorising the executive government to adopt necessary and salutary measures, for the preservation of health, and the prevention of disease.

There is no branch of medical education, from which a practitioner may not



derive useful information on some points, necessary for enabling him to deliver, before courts of law, an opinion consistent with truth and with justice. But it not unfrequently happens, that in general courses of lectures on Anatomy, Chemistry, or the Practice of Medicine, the attention of the student is less particularly directed to these points than their importance merits. Accordingly, in several of the foreign Universities, especially in those where the subject of law has been most attended to, the establishments have lately been increased, by the appointment of a *Professor Medicinæ Forensis*.

When the Professorship of the Institutions of Medicine in the University of Edinburgh was conferred upon me, I imagined, that a few lectures on the *Institutiones Medicinæ Legalis* might with propriety be delivered from that chair. I therefore introduced into the Prospectus of my Course, some general heads respecting those questions, coming before criminal, civil, or consistorial courts, in the determination of which the opinion of a medical

cal practitioner is required. The lectures on these subjects were at first delivered at the end of the course; but, finding that they extended to a greater length than I was aware of, in place of referring them to the end, I delivered, during the last winter, a weekly lecture on the subject of medical jurisprudence.

It is now my intention to continue the same plan; and, by appropriating to the *Medicina Forensis* a lecture every Saturday at two o'clock, these will, in some degree, constitute a separate course, and may perhaps be thought not unworthy of the attention of some who would consider lectures on the Institutions of Medicine in general as foreign to their other studies. It is particularly the duty of the able Lawyer, not to allow his client to suffer from the ill-grounded opinion of an ignorant medical practitioner. Some, therefore, of those who are engaged in the study of that profession, may perhaps consider this branch of medical education as not altogether unworthy of their attention.

It is unnecessary to observe, that the following Heads of Lectures are intended almost solely for the use of those who may hear the observations I shall deliver on the subjects proposed. But I have been induced to offer them to the public at large, from the hopes that they may thus fall into the hands of some who are well informed on every question which respects the laws of this country; and who, although I may not have the honour of being personally acquainted with them, will yet candidly communicate to me remarks and observations, by which my future lectures on this subject may be improved. I shall only add, that every suggestion of this nature will be thankfully received,

By their most obedient servant,

ANDREW DUNCAN.

EDINBURGH, }  
Oct. 10. 1792. }

POST-

## POSTSCRIPT.

THE Lectures on Medical Jurisprudence, have been regularly continued at Edinburgh every winter session since they were first begun ; a Lecture on this subject being delivered every Saturday at two o'clock. Although, however, I have thus had occasion repeatedly to consider the questions which are here treated of, yet I have not found it necessary to make many changes on my general plan. The present edition, therefore, of these Heads of Lectures, is little different from those which have formerly appeared. But when they are now again presented to the public, it is not without some alterations and additions.

OCTOBER 10. }  
1801. }



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HEADS OF LECTURES

ON

JURIDICAL MEDICINE.

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INTRODUCTION.

**G**ENERAL observations on the nature and importance of the subject—on its intimate connection with other branches of medicine—Advantages of bestowing upon it a separate consideration—Chief general branches into which the subject may be divided.

1. Questions before Criminal Courts.
2. Questions before Civil Courts.
3. Questions before Consistorial Courts.

I. CRI-

## I. CRIMINAL COURTS.

### *Inspectio cadaverum legalis.*

**O**BSERVATIONS respecting the persons who ought to be present at the legal inspection of dead bodies, or the examination of those who have received dangerous wounds—Place of examination—Examination externally—Examination internally—Written report of the examination—Proper form of a report.

### *Homicidium.*

*Homicidium per vulnus.*—Different classes into which wounds have been divided—certainly fatal—not certainly fatal—accidentally fatal.

*Homicidium per contusionem.*—Different ways in which contusion principally proves fatal—by concussion of the brain—by rupture of some important viscus or large vessel—by internal effusion—by inflammation and its consequences—by a peculiar impression on very sensible organs—circumstances



cumstances influencing the report with respect to these.

*Homicidium per suspensionem.*—Principal questions to be determined on this subject.

—1. Whether the person found has been hung up when alive, or only after death?

—2. Whether he has hanged himself, or been hanged by another?—Circumstances by which these questions may sometimes be determined—Signs of death from hanging—general signs—special signs—circumstances to be particularly attended to respecting these.

*Homicidium per submersionem.*—Investigation whether the body has been plunged into water when alive, or only after death.

—Whether the death, when it has preceded submersion, has been natural or violent—general signs of death, from drowning—special signs—circumstances to be attended to previous to examination—circumstances indicating the employment of means for recovery—propriety of public institutions for this purpose.

*Homicidium per suffocationem.*—Observations on the causes of death, referred to this general head, and the signs by which they

they are distinguished—compression of the trachea—forcibly shutting the nose and mouth—obstruction of the fauces—load upon the body, but particularly on the chest—suffocating vapours.

*Homicidium per intoxicationem.*—Observations on the definitions given of poison—general view of what have been called simple poisons—the venena incognita mentioned by writers on the toxologia—venena velocia—venena lenta—stimulant or inflammatory poisons—narcotic poisons or stupifiers—remarks on the tests of poison in general—from the manner of attack of the symptoms—from the matter discharged by vomiting—from inspection of the body after death.

Remarks on the principal tests considered as demonstrating particular poisons—tests of arsenic—of lead—of corrosive sublimate—of copper—of opium—of laurel water.

### *Infanticidium.*

CIRCUMSTANCES giving rise to difficulty in determining cases of child-murder—Observations on the circumstances considered

ed as proving that a child has been still-born—observations on child-murder from wounds, contusions, suffocation or drowning—from neglecting to tie the umbilical cord—from the action of cold—from want of nourishment.

*Abortus procuratus.*

OBSERVATIONS on the variety of circumstances giving rise to abortion—Different species pointed out by the writers on the *medicina forensis*—*abortus violentus*—*medicamentosus*—*spontaneus*—causes employed to produce the *abortus violentus*—the introduction of a sharp instrument through the vagina into the uterus—external violence—general concussion of the system—imminent danger of the death of the mother, as well of the child, from these—observations on the circumstances proving abortion to arise from these causes. Observations on the *abortus medicamentosus*—on the *abortus spontaneus*.—Circumstances necessary to be attended to before an opinion can be given, that an *abortus procuratus* has taken place.

*Stubrum*

*Stuprum violentum.*

OBSERVATIONS on the different species of rape pointed out by the writers on the *medicina forensis*—perfect or consummated rape—imperfect or attempted rape—pretended rape—*signa deflorationis*—*signa feminae jamdudum defloratae*.

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## II. CIVIL COURTS.

*Infania.*

OBSERVATIONS on the affections comprehended under this general term—circumstances from which it becomes the subject of investigation in Civil Courts—Principal distinctions among the mental affections referable to this head—*Mania*—*Melancholia*.

*Mania*.—Circumstances in the general conduct of an individual, distinguishing mania—

mania—circumstances in addition to these from other sources also affording a diagnosis—from causes apparently inducing the affection—from the expression of the countenance—from a peculiar violence of temper—from the state of the appetite—from the condition with respect to sleep—from the condition with respect to cold—from resistance to the operation of active medicines.

*Melancholia.* — Particulars from which the presence of melancholia may be most certainly determined—circumstances in addition to the general behaviour serving to distinguish real from feigned melancholia—from the cause inducing it—from the appearance of the countenance—from the influence of hunger or cold—from the condition of sleep and excretions, particularly by stool and urine—from the effects of medicines.

Observations on different important questions respecting insanity, exclusive of the evidence of its presence. 1. Whether there be a probable change of reconvalescence?—circumstances by which this question is chiefly to be determined—from predisposition

sition—from the nature of the exciting causes—from the connection of the affection with other diseases—from the age of the patient—from the continuance of the disease—from the appearance of the countenance—from the presence or absence of febrile symptoms—from the condition of the principal functions—from the state of lucid intervals—from the effects of medicines. 2. Where there is a considerable abatement of symptoms, whether the recovery be so complete as to warrant restoration to the possession of property and liberty?—circumstances by which this question is to be determined—from the state of conversation—from the state of the functions—from the effects of former exciting causes—from the length of intervals of sound reason. 3. Where there has been a complete recovery, whether there be a chance of a recurrence of the disease?—circumstances from which there is the most probable chance of a permanent recovery—want of hereditary disposition—security against the future action of the former exciting causes—continuance of the recovery—



ty—total absence of symptoms of derangement during that interval.

### *Fatuitas.*

OBSERVATIONS on the circumstances from which idiotism comes under the cognizance of Courts of Justice—particulars by which this state is chiefly distinguished—particulars confirming the judgment formed from leading principles—inquiry whether idiotism be congenital or accidental—observations on the circumstances giving rise to accidental idiotism—connection which idiotism often has with a particular appearance of the countenance—with an inarticulate manner of speaking—with a very profuse discharge of viscid saliva—with an uncommon increase of fatness—with a singular disposition to drowsiness.

### *Graviditas.*

OBSERVATIONS on the different questions respecting pregnancy which come  
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before Courts of Justice—*Graviditas simulata*—*Graviditas celata*.

1. *Graviditas simulata*—Observations on the circumstances leading females to feign pregnancy—with the view of disappointing the legal heir—with the view of extorting money—with the view of exemption from punishment for different crimes—Observations on the circumstances considered as indicating pregnancy—on circumstances giving presumption of it at an early period—on the circumstances considered as demonstrating it at advanced periods—obstruction to the menstrual discharge—the touch internally—the enlargement of the abdomen—the motion of the child, discovered by the touch externally.

2. *Graviditas celata*.—Remarks on the motives leading females to conceal pregnancy—circumstances giving presumption of this concealment at early periods—uncertainty till the sixth or seventh month—remarks on the circumstances by which it is considered as demonstrated at after-periods. Observations on the circumstances from which a probable opinion may be formed, whether

whether a pregnancy when present be the first or not—from the frenulum at the labia pudendi—from the figure of the transverse rima at the os uteri—from the state of the cervix uteri—From the condition and appearance of the abdomen.

### *Partus.*

OBSERVATIONS on different circumstances leading to inquiries respecting delivery before Courts of Justice.—*Partus celatus*—*simulatus*—*serotinus*—*repentinus*.

*Partus celatus.*—Observations on the circumstances considered as demonstrating a preceding delivery—soft swelling of the external genitals—increased wideness of the vagina—lochial discharge under a bloody or ferous form—the condition of the orifice of the uterus—the condition of the abdominal integuments—the condition of the mammæ—varicose maculæ on the legs.

*Partus simulatus.*—Observations on the different circumstances considered as evidences of supposititious birth—from the presence or absence of signs of pregnancy  
—of

—of signs of delivery—observations on different collateral circumstances claiming attention—the period of the female's life—the previous condition of her menstrual discharge—the state of the husband—the appearance of the child—the state of the abdomen of the female.

*Partus ferotinus.*—Questions from this circumstance respecting the legitimacy of children—causes alleged to retard delivery—latitude on this subject admitted by the laws of particular countries—doubts of the possibility of the partus ferotinus beyond a week or two.

*Partus repentinus.*—Observations on the circumstances under which premature birth becomes the subject of judicial inquiry—Causes of premature birth—Condition of the infant when born before the seventh month—Evidence, from the condition of the infant, of the time from conception at which the delivery has taken place.

*Morbi.*

OBSERVATIONS on different questions, respecting particular diseases, before Civil Courts—*morbi simulati*—*celati*—*imputati*.

*Morbi simulati.*—Observations on the circumstances under which diseases are commonly feigned—on the persons by whom they are chiefly feigned—by beggars—by the indolent—by those desirous of escaping military duty—by those condemned to certain corporeal punishments—by those whose diseases have been induced by the violence or outrage of others—by the accomplices of empirics—by the accomplices of religious impostors—observations on the diseases commonly feigned, and on the marks by which they are to be detected—ulcers of the legs—hernia—epilepsy—fever—jaundice—hydrocephalus externus—vomiting of animals.

*Morbi celati.*—Observations on the circumstances rendering concealed diseases the subject of judicial inquiry—particular  
contagions

contagions—diseases giving a legal objection to marriage—diseases incapacitating from holding certain offices.

*Morbi imputati.* — Observations on the circumstances under which diseases have chiefly been imputed to particular persons — on the particular diseases chiefly imputed to individuals — dotage — periodical insanity—lues venerea—grounds on which questions respecting such imputations may be determined.

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### III. CONSISTORIAL COURTS.

GENERAL observations respecting the *quæstiones medico-legales* which come before consistorial courts in this and other countries.

#### *Impotentia virilis.*

OBSERVATIONS on the circumstances on which impotence in males principally depends—with respect to particular females —with

—with respect to females in general—Incapability of erection—Incapability of emission—Observations on the principal causes producing each of these.

*Sterilitas muliebris.*

OBSERVATIONS on the general causes of sterility in females—Division of these into different heads—1. Absolutely incurable—2. Relatively incurable—3. Certainly curable—Observations on the principal causes referable to each of these heads.

*Sexus dubius.*

OBSERVATIONS on the grounds on which questions respecting hermaphrodites may come before Courts of Justice—Remarks on the definitions given of hermaphrodites—different kinds to which they have been referred—hermaphroditus masculinus or androgynus—hermaphroditus femineus or androgyna—hermaphroditus verus—observations on the appearances distinguishing each of these—general conclusions respecting

specting the sex of what have been termed Hermaphrodites.

*Syphilis.*

OBSERVATIONS on the different grounds on which venereal infection may become the subject of inquiry before Courts of Justice—on the questions chiefly to be determined with respect to such complaints.

1. Whether a venereal infection does exist?
- 2. At what time it has been communicated?
- 3. In what manner it has been communicated?

Observations on the circumstances on which these questions have in general been determined—cases creating doubts with respect to the circumstances on which dependance has principally been placed.

THE END.



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HEADS OF LECTURES

ON

MEDICAL POLICE.

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## P R E F A C E.

**T**HE following Observations on the Nature, Extent, and Importance of Medical Police, I delivered in the College of Edinburgh, on the 12th of May 1801, as an introduction to a course of lectures on that subject; and as it is my intention, if my health and other circumstances will permit, to continue similar lectures during future sessions, I now venture to submit my sentiments to the examination of the public.

Oct. 20. 1801.



# INTRODUCTION.

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GENTLEMEN,

I HAVE intimated my intention of delivering, during this summer, a Course of Lectures on Medical Police; and in the present lecture, I propose, briefly to point out to you, the Nature, Extent, and Importance of this branch of Medical Education.

Medical Police is one great division of a subject, which has, of late, very much engaged the attention of some of the most learned men on the Continent of Europe; particularly, of the learned in Germany. What they have denominated State Medicine, comprehends all that aid which the Science of Medicine can afford, for the benefit not merely of individuals, but of the nation. By the most distinguished writers on the subject, it has of late been

divided into two great branches, Juridical and Political Medicine.

Juridical Medicine, or Medical Jurisprudence, comprehends that information afforded by different branches of medicine, which is necessary for elucidating certain doubtful questions before courts of law. Of these, there are many, of which neither judge nor jury can form a proper opinion, without the aid of an intelligent medical practitioner. Of the principal questions, however, coming before courts of justice, whether criminal, civil, or consistorial, I have already treated, in my Lectures on the *Medicina Forensis*, during the winter: And I flatter myself, that, to attentive hearers, the observations then offered may be of some use, particularly, by enabling them to support their own credit, and the dignity of their profession, when they are examined as evidences before courts of justice; to defend injured innocence, against the shafts of groundless suspicion, or malevolent calumny; to detect atrocious guilt, though concealed with the deepest art; or to lead to the distribution

bution of material justice, where the person, property, or life, of an individual, are at stake. Of these *quæstiones medico-legales*, I mean not now to say any thing: But it is my intention to appropriate to them in future years a lecture every Saturday during the winter, as I have done on former occasions.

The lectures which I am now to deliver shall be entirely confined to the second branch of state medicine, the *Politia Medica*.

Medical Police is a subject of great importance, and widely extended influence. It regards not merely the welfare of the individual, but the prosperity and security of nations. It is, perhaps, the most important branch of general police; for it extends over the whole population of the state; and it particularly regards the prosperity and happiness of those, on whom the gifts of fortune have been bestowed with the most sparing hand. Hence, for the protection and comfort of the poor, with every wise Legislature, many of its principles have acquired the authority of laws. From what may be called even the



commencement of civil society, in every well-regulated government, laws have been enacted, deriving their origin from this branch of knowledge. Such are the statutes in Britain, as well as in other countries, respecting the fouling of waters, the contamination of air, the exclusion of contagion, the support of the poor, and many others. But these laws, thus originating from medical precepts and doctrines, are scattered through extensive codes, where they are to be met with only in the order of enactment. Even in the most extensive systems of the *medicina forensis*, subjects of medical police have been much neglected. Thus, in the *Corpus Juris Medico-legale* of Bernard Valentini, and in the *Quæstiones Medico-legales* of Paulus Zacchia, large folio volumes, which were considered as standard works on state medicine, about the middle of the last century, what respects medical police is mentioned only in a few short paragraphs.

For the most minute consideration of the *Politia Medica*, and for its separation from the *Jurisprudentia Medica*, we are chiefly indebted

debted to an eminent German author, Dr Frank, formerly Professor at Pavia, now at Vienna. His enlarged mind, perceived, and fully vindicated, the importance of this branch of medical knowledge. Several years ago, he began to publish an extensive and beneficent system on this subject, in the German language. This work soon attracted the notice of almost all Europe. Different volumes of it, as they appeared in succession, were speedily translated into the Italian, and other continental languages; and it has had the effect of calling the attention of legislators and magistrates to subjects of medical police, much more than at any former period.

Medical police now attracts the particular notice of many of the best-regulated governments. The wise magistrate is anxious to become acquainted with its principles, and to carry them into execution. From this, the best consequences have ensued; and its influence may be distinctly perceived in the countries in which it is most cultivated.

In

In Britain, Medical Police has been by no means altogether neglected. In some of its branches, at least, especially in what respects prisons and hospitals, the exertions of the philanthropic Howard have been highly beneficial, not only to his own country, but to the human race. It must, however, be allowed, that, among us, Medical Police has been cultivated only by a few. It has not been the subject of much publication; and it has never, as far as I know, been the subject of Lectures; though, in several of the foreign universities, Professors are expressly appointed for instructing industrious students in this branch of knowledge.

There are, however, few countries, in which, from proper cultivation, more might be expected, than in Britain. For in no country, perhaps, is the spirit of real patriotism, and true benevolence, more prevalent. No nation is more generous in public charitable institutions; and in no country does the individual more willingly appropriate part of his opulence for the relief of distress. It is only necessary to  
prove,

prove, that an undertaking will be advantageous to the community, to obtain that support which it requires. If, therefore, a knowledge of the principles of medical police were more generally extended in Britain, the happiest consequences might be expected. But for this purpose, it is requisite that it should in some degree be separated from the professional part of medicine, and that it should be communicated in a form generally intelligible.

It is then, with these intentions, that I now propose to make it the subject of Lectures, in a separate course; and I would fain hope, that even my efforts may be productive of some good consequences. This can hardly fail to be the case, if I shall be fortunate enough to rank among the number of my hearers, any gentlemen, actuated by that true philanthropic spirit, which has called forth the exertions of a Howard or a Rumford; or if I shall be able to excite, in the breast of any auditor, an ardent desire to obtain respectable eminence, by means which are within the reach of almost every individual. True  
dignity

dignity consists neither in titles, riches, nor learning. Its highest excellence is real patriotism. A very able writer has long since justly observed, “ *Non fasces, non purpuram,*  
“ *non extructas in altum divitias, non inge-*  
“ *nium artibus atque scientiis utcunque orna-*  
“ *tum et imbutum ; sed animum communi utili-*  
“ *tati inservientem, dignitas sequitur.*” Of this dignity, even amidst the illustrious exploits of heroes, both by sea and land, the present age affords many examples. In the fair estimation of posterity, the name of a Rumford will perhaps be considered as entitled to vie even with those of the most distinguished British commanders. Great and glorious as their achievements were, and important as they have been in their consequences to the best interests of Britain,—to the liberties of Europe,—and to the real rights of men, not only in Egypt and in Italy, but in every quarter of the globe ; yet in some respects, at least, in the eye of the philosopher, they will be held inferior to those unremitting efforts of ingenuity and industry, which have been displayed by the discerning and humane Rumford. For, with the wise philanthropist, the arts of  
peace



peace have a more just claim to admiration, than the horrors of even the most necessary and the most successful war.

Of these arts, Medical Police is not the least important. Can medical knowledge be more usefully employed, than in pointing out the means of improving and of preserving health?—of supplying proper nourishment to the indigent, especially in times of scarcity?—of securing to the diseased, the advantages intended by their benefactors?—of rearing the orphan to be the support of the nation, by whom he has been adopted?—of alleviating the miseries attendant on the lamentable situation of the unfortunate maniac?—and of diminishing the horrors of confinement, not only to the unfortunate prisoner of war, but even to the guilty criminal? It is indeed true, that from the utmost knowledge of these subjects, and from the utmost exertions of humanity, a medical practitioner cannot expect to derive much pecuniary emolument: Nay, in most instances, his attention to these subjects will rather be expensive than lucrative. But he will often derive from them higher compensations than pecunia-

ry rewards can afford. He will enjoy the luxury of doing good. By being possessed of that knowledge which enables him to give the most judicious advice to the Civil Magistrate, for the prevention of disease, he will obtain a respectability of character, rarely to be derived from the cultivation of any profession for mere gain; and he will add very considerably, if not to his wealth, at least to his happiness.

On these grounds then, I have been disposed to think, that, among the students of medicine, there are some, who will cheerfully dedicate a portion of their attention to the study of Medical Police. And the object of the course on which I am now to enter, is to facilitate these studies, by communicating to students some knowledge, which they could not easily acquire, without considerable labour and research: For, on this subject, much of late has been written with great ability.

Without taking notice of the more ancient authors, Valentini, Zacchia, Alberti, Heister and others, I shall beg leave, on the present occasion, to mention to you a few of  
more



more modern date ; and I shall first point out to your attention, a system to which I have already alluded, that of Dr Jo. Pet. Frank of Vienna. Dr Frank's work, on Medical Police, consists, in the original German, of four large octavo volumes ; and, for completing his plan, two more are still expected.

The first volume is principally occupied with the subject of marriage. It contains many important particulars, much more applicable indeed to Popish, than to Protestant countries. He there treats of the celibacy of ecclesiastics, and of nuns. He treats also of too early and too late marriages ; of unequal and unhealthy marriages ; but above all, of the care necessary in every stage for preserving the health of pregnant and lying-in women. On these particulars, it is unnecessary to observe, that the population and strength of a nation must very much depend.

In the second volume of this work, Dr Frank treats of the attention which is necessary for the preservation of the human species, in the earlier period of life. He  
first

first considers the proper management from birth to the seventh year, which may be viewed as the commencement of the period for education. Here he points out, as might naturally be expected, the great duty of every mother, to suckle her own children; and he demonstrates the influence which this has on the welfare of the state. Here also he has many important remarks, on the care which should be bestowed by every well-regulated government on orphans and on foundlings.

From this, he proceeds to the period of education, which extends from the seventh to the twenty-first year. Here he states his opinions on political superintendence, with a view to what may be called Physical Education. Under the term Physical Education, he particularly treats of the means of giving strength of body, as well as of mind, and of the evils which result from too great exertion of faculties, whether mental or corporeal, at an early period of life. But he inculcates, also, the benefit of considerable bodily exertion, and points out the good effects which may be expected

pected in the education of youth, from the restoration of the gymnastic exercises of the ancients. He treats also of the proper conduct of schools and colleges, with a view both to mental instruction, and to bodily health and vigour.

In the third volume, Dr Frank treats of medical police with respect to the adult; and particularly, of the means of preserving good health. This volume, accordingly, is almost wholly occupied with observations on diet, drink, temperature, and dwellings.

The fourth volume contains his observations on particulars injurious to the public safety. It treats of the danger arising to the human species from vitiated air, from putrid exhalations, smoke, bad water, and various other particulars. Here also he points out the regulations which are necessary with respect to rabid or poisonous animals, such as mad dogs, serpents, or the like. He considers likewise, the attention which is due, by the state, in the care of unfortunate lunatics, and in the

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provision

provision of proper hospitals for the sick and the aged.

This volume is concluded with some observations on the termination of human life ; on the mismanagement of moribund persons ; on the danger of being buried alive, from too early funerals ; and on the danger of diseases arising among the living, from funerals being too long delayed.

After this short view of the contents of Dr Frank's work, I need say nothing either of the extent or importance of the subjects of which it treats. The same topics could not fail to engage the attention of succeeding writers. They have accordingly been the subject, both of publication and of lectures, with several medical Professors of eminence, particularly with Hufstey, Metzger, and Hebenstreit.

In the English language, no system of Medical Police, as far as I know, has yet been published. There are, however, some late publications, from which useful information on particular branches of it may be

be derived, especially with respect to Hospitals. Regulations for the Management of Regimental Hospitals, composed by the Medical Board at London, were printed by order of the Commander in Chief in 1799; and a small treatise, giving an account of the Royal Artillery Hospital at Woolwich, has been lately published by Dr Rollo. In both these, are to be found many useful remarks respecting the proper conduct of hospitals.

Many important observations also, respecting different particulars in Medical Police, are to be met with in the writings on prisons, by that illustrious philanthropist, the late admirable Mr Howard. He indeed may be said to have been a very singular man; but he was a man of singular virtue. He devoted almost his whole life to unremitted exertions for the alleviation of human misery. For that purpose, he visited almost every dungeon in Europe to which he could find access; till at last, as was indeed to be dreaded, he fell a victim to the contagion of jails. He died a self-devoted martyr, for the good, not merely of his own country, but of the

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human



human race. He has, however, transmitted to posterity, writings which cannot fail to have much influence in alleviating the miseries of his fellow-creatures; and he has transmitted to them also an example, which has a just claim to the admiration of mankind, and which can hardly fail to obtain it, even to the latest ages.

The last writer I shall mention is one, whose exertions we have lately had an opportunity of witnessing, at this place, and whose reputation is already justly extended over all Europe. - I mean, Benjamin, Count Rumford. The Essays which he has published, treat indeed of a great variety of subjects. But many of the most valuable of them, are strictly on the subject of Medical Police. He has particularly introduced into practice, plans of the greatest utility to mankind, respecting diet, fire and light. But the discoveries which he has already made, will, perhaps, in a few years, be reckoned among the least proofs of his merit. For his profound knowledge of these subjects, has pointed out to him many particulars, especially

especially respecting Heat and Light, which still remain to be improved. Accordingly, with the wisdom of a true Philosopher, and with a liberality which would do credit even to a Monarch, he has held out rewards, both honourable and pecuniary, for future discoveries. He has unalienably appropriated a considerable sum in the public funds of Britain, the interest of which is annually to be bestowed in premiums for discoveries most useful to mankind, on the subjects of heat and light. These premiums are left to the determination of a body of men, who may be presumed both able and upright judges, the Royal Society of London. Under their superintendence, these premiums can hardly fail to lead to important improvements on fire-places, flues, boilers, lamps, candles, and similar articles in daily use; and they will, I trust, call forth the exertions of genius, not only in the present age, but among latest posterity. Thus, the benevolent Rumford will be an annual contributor to the good of mankind, as long as Britain continues to hold a distinguished rank among polished nations.



The observations which have now been offered, are, I trust, sufficient to shew the extent and importance of Medical Police; and nothing more need be added to point out this subject as well meriting the attention of every industrious student of medicine, who is desirous of acquiring that knowledge, which may qualify him for giving the best advice for the preservation of the public health. In the short course on which I am now to enter, and which shall consist only of about twenty lectures, I can by no means aim at a full or accurate discussion of even the most important particulars. I mean to confine my present lectures to a short view of some of those subjects in Medical Police which I consider as the most interesting, and which, more particularly, claim the attention of the student of medicine. I shall treat most fully of Hospitals for the Sick; and I flatter myself with the hopes, that the attentive hearer may derive some useful information from the remarks now to be offered.

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GENERAL  
HEADS OF LECTURES  
ON  
MEDICAL POLICE.

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I. AIR.

Causes vitiating the air.  
Impregnations which it receives.  
Means of purifying air.

2. Water.

Necessity and advantages of a copious supply.  
Tests of purity.  
Means of correcting impurities in water.  
Varieties from different sources,  
    pit wells,  
    rain or snow,  
    lakes,  
    rivers,  
    springs.

Different methods of conducting  
water to towns.

Fouling of waters.

3. Food.

Comparative quantities of nourish-  
ment afforded by different kinds.

Bread—Vegetables—Animal food.

Cookery—Healthy—Economical.

4. Drink.

Diluent—Cordial.

5. Fire.

6. Light.

7. Exercise.

8. Physical education.

9. Prevention of contagions.

Pestis.

Typhus carcerum.

Typhus icteroides.

Dysenteria.

Variola.

Syphilis.

Syphilis.

Rabies canina.

10. Prisons,

for criminals,

for debtors,

for prisoners of war.

11. Hospitals,

for the sick.

Dispensaries.

City or county hospitals.

Military Hospitals.

Naval Hospitals.

Hospitals for convalescents.

for incurables.

for the insane.

for syphilitic patients.

for smallpox.

for lying-in women.

Work-houses, and houses of industry.

for the aged.

for the blind.

for the lame.

for the indigent.

for rearing children.

Hospitals

Hospitals for education.

Orphan hospitals.

Foundling hospitals.

12. Burial of the dead.

Proper period for funerals.

Situation of burying places.

Method of conducting funerals.

Bills of mortality.

HEADS

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# HEADS OF LECTURES

ON

## HOSPITALS.

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### I. *Dispensaries.*

**D**ISEASES to which Dispensaries are peculiarly adapted—Situations to which they are adapted—Advantages from increasing the number of them in the kingdom—Objects principally to be aimed at in dispensaries—giving gratuitous medical advice to the indigent—supplying them with proper medicines—furnishing them with certain cordials—with certain articles of clothing—with certain articles of food.

Accommodation in the way of building necessary for a Dispensary.—Waiting room

room — Consulting room — Apothecary's shop — Lobby to the Shop — Room for electricity, and other operations — Dwelling house for the apothecary — for the porter — Dispensary garden.

Medical Officers. — Physicians — Surgeons — Apothecary — President — Vice Presidents — Managers or Directors — Treasurer — Comptroller — Secretary — Officer.

Means of obtaining funds. — Subscriptions giving a title to certain privileges — Donations — Charity sermons — Legacies.

General meetings of contributors. — Annual report of the effects of the institution, and state of the funds.

Means of teaching, and of improving medicine, by Dispensaries. — Pupils for Pharmacy — for the Practice of Physic — Trials of new remedies.

## 2. *County or City Hospitals.*

*Situation.* — Dry foundation — Airy position — not exposed to bad air — to marsh effluvia — to smoke — to noise — Command of ground —



ground—for proper walks—for a garden—for grafs—A plentiful supply of water for domestic purposes—for cleanliness—for baths.

*Structure.*—Plans of small and of large Hospitals—Plans, admitting of gradual additions—Materials of which to be constructed—Height of Hospitals.

*Size.*—Inconveniencies from very small Hospitals.—Advantages of spacious buildings—Evils from a number of patients under one roof.

*Government.* — Treasurer — Managers — Secretary—Accountant—Physicians—method of appointment—footing on which they should hold the office—Surgeons—for operations—for consultation—Records of Practice—Clerks—Clinical lectures—Pupils—Dressers — Apothecary — Apothecary's Assistants — Matron — Nurses — Servants — Patients — Admission — Arrangement—Government with respect to medicines or operations—diet—cleanliness—exercise—work.

*Medicines.*—

*Medicines.* — Hospital shop — Hospital Pharmacopœia.

*Diet.* — Tables of diet—Low diet — Middle or ordinary diet — Full diet — Milk diet—Occasional articles of diet.

*Firing.*—Different kinds of fuel—Fires for dressing victuals—Fires for giving comfortable heat to rooms and wards—economical management of fuel—means of avoiding smoke.

*Lights.* — Candles — Lamps — different kinds of oils—means of improving oils—structure of lamps—Wax tapers.

*Bedding.*—Bedsteads—of wood—of iron—structure—size—Mattresses—of straw—of wool—of hair—Sheets—blankets—coverlets.

*Clothing.* — Attention necessary to the clothes introduced—Clothes occasionally furnished to patients—Linen shirts—flannel shirts—cotton shirts.

*Washing.*—Proper selection of articles to be washed—Immersion of articles into cold water—Into boiling water—Washing machines.

*Ventilation*

*Ventilation and purification of air.—*

Means of promoting ingrefs of air—means of promoting egrefs—means of destroying noxious qualities.





# E L E M E N T S

O F

# T H E R A P E U T I C S.

By A N D R E W D U N C A N, M. D.

Of the Royal College of Physicians at Edinburgh.

——Vitanda est improba Siren

Defidia.——

H O R A T.

E D I N B U R G H:

Printed by BALFOUR, AULD, and SMELLIE,  
for W. DRUMMOND,  
M, DCC, LXX.



T O

ALEX. MONRO DRUMMOND, M.D.

Senior Annual P R E S I D E N T

Of the

M E D I C A L S O C I E T Y in Edinburgh ;

And to

The other M E M B E R S of that S O C I E T Y,

This Treatise is Dedicated,

B Y

The A U T H O R.



QUOIQUE vous pensiez, peut-être, du motif secret de mon empressement, il est honnête et raisonnable, il mérite que vous l'approuviez ; je réponds d'avance, au moins des mes intentions.

J. J. ROUSSEAU.

To the MEMBERS of the MEDICAL  
SOCIETY in Edinburgh.

GENTLEMEN,

WHEN I dedicate the following pages to you, I am actuated by motives somewhat different from those to which addresses of this kind are in general to be attributed. Dedications, for the most part, proceed either from a grateful sense of favours already received, or from the expectation of future ones. A different reason, however, has determined me to use your name on the present occasion.

To receive opinions from the greatest authorities in medicine, with that diffidence which becomes cautious inquirers after truth, has ever been the peculiar characteristic of your Society. At your meetings, every improvement, or attempt to improvement, in the medical art, which is offered to the public, meets with a candid and dispassionate examination. Equally strenuous advocates

vocates in the defence of truth, and attentive critics in the detection of error, you are ever ready to hear, and not unwilling to be convinced by arguments on either side.

To you, then, I venture to address the following plan for an inquiry concerning the doctrine of means employed in the cure of diseases, and the outlines of the execution of the subject upon that plan, as to those by whom the fairest opportunity will be afforded me of defending or farther illustrating my sentiments; and from whose corrections, I expect I shall hereafter be best enabled to rectify the errors of the present performance, and to improve future inquiries on the same subject.

I am, GENTLEMEN,

Your Fellow Member,

And Humble Servant,

A N D R E W D U N C A N.

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# P R E F A C E.

**T**H E author of the following sheets presents them to the public inspection, not without that diffidence which the intricacy of the subject, of which he has undertaken to treat, the diversity of opinions entertained concerning it, and his own incapacity to execute his design in a proper manner, must naturally create. From a persuasion, however, that every attempt to improvement in any useful art, although, even in the end, it should prove altogether unsuccessful, is still a sufficient apology for itself, he esteems it unnecessary to adduce any excuse for the imperfect state in which the present production makes its appearance, and will content himself with laying before his readers the intention of this publication.

THE advantages which are to be derived from a proper knowledge of the operation of medicines, which is to be considered as the connecting medium betwixt rational indications for the cure of diseases, deduced from solid reasoning,

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soning, and undeniable facts in practice, evinced by repeated experience, led him to imagine, that less attention was in general paid to this subject than its importance deserved. After leaving the schools of medicine, therefore, a farther investigation of this appeared deservedly to claim his first attention. The result of this inquiry was, that he became dissatisfied with many of the common opinions entertained concerning the operations of medicines. The first method he took of submitting these to the examination of others, was by delivering them in a course of Therapeutical lectures. Any one, however, acquainted with the nature of lecturing, will readily allow, that it may be conducted with much greater advantage, both to the lecturer himself and his hearers, if the former is confined to a determined plan, and the latter are furnished with a proper text. As subservient then to future courses of lectures on the same subject, what is here delivered, under the title of ELEMENTS OF THERAPEUTICS, is offered to the public. Such a performance from its nature cannot be imagined to be free from errors and imperfections, or at least from what



what will appear so to others; while the author, however, cannot, in defence of these, lay claim to that deference which is due to age and experience, he flatters himself he shall be favoured with the indulgence which a juvenile pen has a right to expect; and does not despair, that his publication may at least answer the principal purpose for which it is intended, that of a text-book to his hearers. To those even into whose hands it may fall, who will never have an opportunity of viewing it in its most favourable light, as assisted by the proofs and illustrations offered in lecturing, he hopes it may still so far contain useful information, as to render the perusal of it not altogether fruitless, and in some degree to facilitate their inquiries on the same subject.

THE Elements of Therapeutics, as here delivered, are divided into two parts; the first treating of Therapeutics in general; the second, of particular classes of medicines.

THE first of these parts was formerly read in one lecture, and is an attempt to investigate that plan upon which the prosecution of this subject may be conducted with greatest advantage. This, as being the ground-work upon which

which the other entirely proceeds, the author esteemed it necessary not to treat of under the form of general heads, but to deliver at full length. What led him to this, was, that the reader could only be able to determine how far it was proper to consider the subject in this manner, from a full view of the various arguments which may be adduced in its favour, and a proper refutation of the most obvious objections which may be urged against it.

THE second part, treating of particular classes, which is meant as a text to all the lectures, contains the general facts attempted to be established of each particular association of medicines, but without proofs or illustrations. This lame and imperfect method of publication, it must be allowed, labours under many inconveniencies; as the writer is frequently not less necessitated to give an imperfect representation of his sentiments, than the reader is apt to draw erroneous conclusions. These are, however, inconveniencies inseparably connected with the nature of a textbook, and which a consideration of the subject at full length could only supply. The author

thor is well aware, that, from this circumstance, many things here assumed as facts, and laid down as general principles, many rules and observations pointed out as meriting attention, will frequently appear to his readers to be chimerical, ill-founded, or even absurd; he hopes, however, they will neither be condemned as if supported by no proof, nor rejected without some reason. How far he shall be able to deduce conclusive or even probable arguments in their favour, must be left to his hearers to determine; he is not, however, at least conscious of being so far wedded to his own opinions, as to be unwilling to relinquish them upon proper grounds. Sensible of the numerous doubts and imperfections with which this branch of medicine is perplexed, he flatters himself, that, from repeated examination, and the observations of others, he shall hereafter be able to render his own sentiments of this subject more just and correct, and perhaps, upon some future occasion, to present them to the public, in a state less unworthy of their attention.



# E L E M E N T S

O F

## T H E R A P E U T I C S.

### P A R T F I R S T.

#### O F T H E R A P E U T I C S I N G E N E R A L.

OMNEM quasi cognitionem medici colligit, et ad ultimum artis salutaris finem ducit, Therapia generalis. In ea itaque explicanda primum ostendendum est, quo modo, per rationem et experientiam in praemissis disciplinis acquisita cognitio, nunc ordine apto disponatur, quo utilia et certa subtilius tantum disputatis et minus certis praeferantur.

LUDWIG.

———— If vain our toil,  
We ought to blame the culture, not the soil.

POPE.



# P A R T I.

## OF THERAPEUTICS IN GENERAL.

### C H A P. I.

*Concerning the Medical Writings on the* METHODUS MEDENDI.

**A**N attentive consideration of the genius of the human race, and of the circumstances in which they are placed by nature, will be sufficient to convince any unprejudiced inquirer, without the testimony of ancient records or traditions, that the exercise of arts must have been coeval with the existence of man. Among others, that of medicine, which proposes for its end the preservation of health and cure of disease, might readily be concluded to claim very early attention. When it is considered that

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this is an art taught by instinct to the brute creation, dictated to mankind by the first dawning of reasoning, and daily enforced by every motive of humanity; it cannot be doubted, that, exclusive of being exercised as a separate profession, it has been, without interruption, cultivated from the earliest periods of mankind to the present time. When attention is paid to the end here in view, there is little reason to question, that its cultivation and improvement has always been prosecuted with the utmost care and assiduity which an attempt to alleviate the sufferings of others could draw from the sympathising, and which a just sense of the benefit of health, or an inherent aversion to pain, could command from every one.

ADMITTING then, that such has been the antiquity of the medical art, and such the attention bestowed upon it; were any judgment to be formed concerning its present state, from a comparison of the progress, which, with similar advantages, has been made in others, it would naturally be concluded, that long, before this time, it should have arrived

rived at a degree of perfection, if not absolute, at least nearly approaching it. In judging from the real state of the fact, however, a very opposite conclusion must be drawn; and it cannot be denied, that medicine, although cultivated with these advantages, and formed into a separate profession with such emoluments as to render it a pursuit for men of genius, is still but a conjectural art. This conclusion, however paradoxical it may seem to those who content themselves with a superficial view of the subject only, will not appear strange to any one who has seriously considered the texture of the human frame. The extent and intricacy of an art, which proposes to regulate the motions, and rectify the errors, of an animated machine, cannot be judged of from any analogical comparison with those in which inanimate matter only is concerned. It is not however from thence to be imagined, that medicine is in its nature so intricate, as to be incapable of progress, or that, amidst numberless pretended improvements, there have not been discoveries of real utility.

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THOSE who have professed this art, satisfied that a thorough investigation of every part of it was not within the compass of human genius, have addicted themselves, some to the prosecution of one branch, some of another. Amongst the various subdivisions of this science, none perhaps merits greater attention, and at the same time has been more neglected, than that which teaches the application of means for the cure of disease, or what has been termed *Therapeutics*. It may indeed afford satisfaction to an inquisitive mind, to obtain a thorough knowledge of the minute structure of the animal frame, to be able to detect every deviation from a sound state, and to be acquainted with the various laws which regulate the animal œconomy both in health and disease; but when, besides this, the result of such inquiries can be applied to the cure of diseases, the satisfaction reaped from the investigation will be greatly augmented. Every branch of medicine indeed, which is not subservient to this end, may be considered rather as a subject of curiosity than utility.

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THAT branch of the medical art, which delivers the doctrine of the means employed in the cure of disease, is so intimately connected with the grand purpose of medicine, that its utility cannot be questioned. While at the same time, it is viewed as the intermediate link betwixt theoretical reasonings and practical conclusions, as the means by which a connection is to be traced betwixt the facts of the empiric and rules of the dogmatist, it cannot fail to afford entertainment to the philosophic inquirer. From these inducements to the study of this subject, it might naturally be imagined, that the labour of those engaged in the prosecution of it would be sufficient to render it at least as perfect as the other branches of medicine, and that the writings, from which it is to be learned, are well adapted to that purpose. Viewing the matter in this light, the assertion, that this branch of medicine still remains involved in greater obscurity and error than any other, may seem extraordinary: In order to its being admitted, therefore, it will be necessary to point out from whence it arises; and to endeavour to show in what respects the writings on this sub-

subject have been hitherto ill fitted for affording a complete knowledge of it.

It cannot indeed be denied, that this branch of medicine, both as conjoined with others, and as treated of separately, has been a constant subject of inquiry. Much labour and pains have been bestowed to point out the proper cure of every disease; and innumerable volumes have been written, to ascertain the peculiar properties and mode of action of every substance employed in medicine. But, however numerous the writings on the practice of medicine and *materia medica* may have been, it may still be objected, that they can be considered only as treating, in a secondary way, a subject which, of itself, merits a separate consideration.

THE first of these, to wit, writings strictly practical, which indeed are to be considered as special Therapeutics, after endeavouring to ascertain the particular morbid affections upon which a change is to be produced for the purpose of restoring health; it must be allowed, not only enumerate the means to be applied for  
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this purpose, but likewise illustrate the mode of their application. Were a practitioner, however, to be no farther acquainted with the effects resulting from these means, than he could obtain from this method of investigation, his practice would not only be always doubtful, but frequently dangerous. In order to obtain success from the employment of any mode of cure, it is necessary, that he who uses it should be acquainted with all the effects it is capable of producing, all the consequences which may be expected from it, whether these have any tendency to a cure of the disease, or the contrary. But, in the writings on the practice of medicine, when any mode of cure is mentioned, a complete investigation of its effects would be altogether foreign to the subject of a particular disease; and therefore, by such writers, is universally supposed to be previously known and studied. When therefore, as a necessary preliminary to the proper and safe use of any means of cure to be employed in diseases, we would desire to be acquainted with its full effects upon the system, and with the manner in which it produces them, some further knowledge of this

this subject is necessary, than can be obtained from its history, as delivered in the explanation of the treatment of particular diseases.

It may perhaps be imagined, that the partial view of this subject which can be obtained from those writings more strictly termed practical, will be fully supplied by the writings on the *materia medica*, where every article is treated of separately. To illustrate, however, how far these are unfit for this purpose, it will be necessary briefly to survey the state of that branch of medicine. Were a judgment to be formed of the proficiency made in the subject, from the number of writings which every age has produced concerning it, it might indeed be concluded, that very considerable progress had been made; and, could we rely upon the accounts of the powers of medicines, which almost every author gives of those of which he has treated in particular, this conclusion would be still farther confirmed.

BUT



BUT if, on the contrary, any one in the least conversant in practice would form an opinion of this matter, from what daily observation must teach him, he would not hesitate to affirm, that the dependence which can be put upon such accounts is but very slight. Exclusive of the many boasted properties which inattention, credulity, or cunning, may, at different times, have been the cause of attributing to substances, or modes of cure, where, in reality, there was no foundation for the supposed virtues; there are still other sources of error, which, although not to be detected with equal ease; are, however, not less apt to misguide.

AMONGST the various causes from which errors on this subject may arise, conclusions improperly deduced from observation, even well founded, may be justly enumerated, and are perhaps not the least considerable. When there occurs an undoubted example of the efficacy of any remedy in a particular case, we are but too apt to impose upon ourselves by concluding, that it must have an effect equally advantageous in others, apparently of the same

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nature. As there are, however, not only such a variety in constitutions, but likewise so material a difference in what may be reckoned the same substance, it is by no means surprising, that general conclusions, deduced from a few particular observations, should, in many cases, be found repugnant to truth: And hence it is, that, even amongst the most accurate writers on the *materia medica*, almost every remedy has been celebrated for properties much more considerable than it really possesses. If, however, this observation upon the writers on the *materia medica* in general is well founded, it may be considered as at least one objection against an entire reliance on these authors, for an accurate knowledge of the *methodus medendi*.

BUT another and more valid objection against these may be deduced from the method they have in general followed in treating this subject. The various articles which have been the subject of their inquiry, are, for the most part, treated of in an artificial order; an alphabetic, for example, or some similar one. A history of the *materia medica*, however, executed upon such plans as these,

these, labours under many inconveniencies, when used as the means for obtaining an acquaintance with therapeutics. Many substances in nature, employed for medical purposes, produce upon the body effects very much similar, some assemblages operating in one manner, some in another, whether acting as emetics, purgatives, or in any other mode expressed by such general terms. From this similarity in operation, it may reasonably be concluded, that the individual remedies comprehended under such assemblages should be fitted to produce similar changes on morbid conditions existing in the animal frame. When, however, any particular indication of cure can be answered from the employment of different means, in the greatest number of cases, equal benefit will not be reaped from the promiscuous use of any one ; on the contrary, it will very universally hold, that particular advantage is to be derived from a judicious choice. Those circumstances, however, from which alone any proper judgment can be formed, as to the causes of preference, are only to be learned from an opportunity being furnished for instituting a comparison betwixt the

the different articles thus possessed of the same general mode of operation. The comparison here proposed can be but ill executed, when the articles, thus naturally combined, are, from an artificial arrangement, disjoined in such a manner, that, betwixt the two, attention must necessarily be paid to a variety of other substances, fitted for purposes extremely different. The difficulty then, with which the general doctrines of cure are to be learned from the history of individuals, as delivered in the writings on the *materia medica*, conducted upon this plan, is too obvious to require any additional proof.

BUT, besides these objections against the histories of the *materia medica*, as a foundation for studying the general doctrines of cure, it may farther be alledged, that, in this respect, they are highly deficient. Medicines, possessed of similar properties, operate very much upon the same general principles: What applies to one, therefore, may, with equal propriety, be asserted of another; and a proper view of the general principles of operation, applying to a whole class, will entirely supersede the necessity

sity of repeating them under the treatment of each individual. For this reason it is, that the writers on the *materia medica* have, generally, altogether waved the consideration of these. To them it has, for the most part, appeared sufficient to inform their readers, that the substance treated of possessed purgative emetic, diaphoretic, or such similar qualities; and that, in consequence of these, it had been, and might be, employed with success, in the diseases afterwards enumerated; but, to have endeavoured, under each, to point out, in what manner vomiting, purging, or sweating are produced, and what change would from thence arise in the system, would have been an attempt, which, from its absurdity, could never have been thought of.

BUT, although the consideration of such operations in the system could not, with propriety, enter into the history of individuals; it has frequently, by these writers, been attempted to be supplied by a separate and detached account. But what they have said upon this subject may be esteemed professedly therapeutical; and, in this view, will afterwards come under



under consideration. It cannot, therefore, be included with what they have said of the history of individuals, which, taken by itself, will thus appear deficient. With regard then to the writings on the *materia medica* in general, it may be observed, that, as abounding with errors, as separating the consideration of medicines by nature connected, and as not attempting to explain the general principles of operation, they can by no means be considered as affording a sufficient means for obtaining the necessary knowledge of Therapeutics.

IF the doctrine of means is to be learned neither from practical writings, nor from those on the *materia medica*, in order to obtain the knowledge of this subject requisite for successful practice, recourse must be had to those writings which treat of it professedly. Few authors on the general subject of institutions have left this branch of it entirely untouched; when, however, in their writings, it obtains a separate consideration, it is, for the most part, put posterior to the extended and intricate subjects of physiology and pathology; and,

and, from this circumstance, is usually passed over with less attention than its importance merits.

WITH regard to the writings entirely upon this subject, such of them as are prior to the discovery of the circulation, upon which a knowledge of the true operation of medicines in a great measure depends, can be consulted with but little advantage: It is now necessary to reject these opinions, which, from the ignorance or mistaken notions of those who proposed them, with regard to the leading principles in the system, must, without a very minute examination, appear absurd.

SINCE the discovery of the circulation, many of the best writers upon this subject have belonged to the Stahlian sect: To enter into any particular detail of their doctrines, would be foreign to the present design: It may, however, be alledged, that they are by no means universally admitted. Upon the justice, however, of their particular theories, the truth of what they have delivered, concerning the operation of medicines, must entirely



tirely rest ; hence their writings can be but of little service to those who are not implicit followers of their tenets.

WHAT may, however, be considered as the principal objection to the writings on this subject, is, that the authors of them have, for the most part, aimed at general systematic arrangement. Of this it may be observed, that, although the treatment of the subject followed throughout upon such a plan, provided it could be obtained in perfection, would be a very useful assistant in giving a clear and distinct idea of the whole ; yet, when a perfect arrangement cannot be obtained, and it is necessary to rest satisfied with one labouring under numerous imperfections, the intention of this method is not only frustrated, but it serves even to give us a false and erroneous opinion. If this assertion shall appear to be well founded, and if it is not denied, that every plan for systematic arrangement, hitherto offered, is in a state of imperfection ; the conclusion, against this method of treating the subject, will be sufficiently obvious. It is, in the first place, necessary, then, to evince the truth of this assertion.

ALTHOUGH it may seem extraordinary to affirm, that a general methodic arrangement on this subject, if in a state of imperfection, would only mislead in the idea it gives of the operation of medicines; yet, from nearer inspection, it will appear not without foundation. General systematic arrangement supposes, that the subject, to be treated of, is compleatly comprehended under a few separate and distinct heads. These, again, are branched out by subdivisions till they arrive at individuals, every inferior division being a proper constituent part of the more general head to which it belongs; but retaining, at the same time, the condition of separation and distinctness from every division on a level with it, and from every superior division from which it is not directly deduced. While such precision can be obtained, the end proposed by methodic arrangement may be answered; but, when the articles which should be thus separated come to be blended and confused, the whole purpose of methodic arrangement is entirely frustrated. What is here alleged, with regard to methodic arrangement, must obviously appear in the prosecution and

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application of it to use by the writers on botany and natural history; any farther proof of it then would be superfluous.

IF such precision is necessary to constitute proper methodic arrangement, little benefit can be expected from any attempt in this way in the *methodus medendi*, where the case by no means seems to admit of it. In the best arrangements of this kind, for example, the general division is into such articles as produce their effects by an action on the solids, and such, on the other hand, as act upon the fluids: That all medicines may be reduced to one or other of these heads, is not to be doubted; but, while there subsists a connexion so intimate as that betwixt the solids and fluids in the animal body, it is almost impossible to conceive that the smallest change can be produced upon the one, without affecting in some degree the other also: If this, however, is the case, every medicine may, with propriety, be referred to both these heads, and the whole ground of distinction which the nature of the subject will admit of, even in the first steps towards method, must be entirely rested on the

the vague and uncertain footing of a superior degree of action, which can never be granted to be a solid foundation for precise division. If, however, from the very nature of the subject, it follows, that absolute characteristics cannot be pointed out, whereby what is contained under the one half may be distinguished from what should fall under the other; it must be allowed, that any such arrangement, if not apt to mislead, and even retard our progress in the knowledge of this branch of science, has at least no tendency to forward it. Although not followed by any bad effect, therefore, it may with confidence be affirmed to be productive of no good one : And thus far even the first step towards methodic arrangement here is liable to objection.

BUT the mere want of utility is not the only objection which may be urged against inferior divisions. When this method of arrangement is carried down to the classes into which medicines are divided, that reliance, by which alone it could be of any service in investigation, would be apt to mislead in inquiry, and misguide in practice. In proof of this,

this, an illustration may be taken from any of the classes of medicines. If, for example, upon this footing, the nature of those medicines comprehended under the class of *vesicantia* were to be examined, from observing the divisions through which these are carried, in order to their being reduced to evacuants of serum, it would be concluded, that the class of *vesicantia* are a set of medicines which affect the body only; that their action there is upon the fluids alone; and that the only change they produce upon these is a diminution of quantity: So far, however, is this from being in fact the case, that the greatest part, if not the whole, of these conclusions, will, from the slightest observation of what we have constantly an opportunity of observing, appear to be entirely without foundation.

THE action of blisters, from this view of the matter, is merely corporeal. Daily experience, however, affords sufficient conviction that they act not only upon the body, but upon the mind also, and with this intention they are frequently indicated, often employed, nor is their power of exciting pain less certain or  
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less useful, as the means of obviating morbid affections of the system, than that of evacuating serum. But, besides this, the changes they produce upon the body are not confined to the fluids alone; the solids also, from their action, are manifestly and variously affected. The very evacuation of the fluids which here occurs, can be considered as nothing else than the consequence of an increased action in the solids; and indeed, when every other sensation has some effect upon the solids, it cannot be imagined that one so considerable as arises from the use of blisters can take place without a very remarkable affection. Whether then a judgment is formed from the nature of blisters, or from their consequences, an action upon the solids is undeniable.

AND, still farther, the action of blisters, even upon the fluids, is not that of a diminution of quantity alone; they do not evacuate the fluids as they circulate in the larger vessels; the abstraction which here occurs from the general mass, is but of a particular part, a quantity of serum only is discharged. It is, however, an established fact, that if, from any  
heterogeneous

heterogeneous fluid, a diminution occurs of one component part only, the nature of the remaining mass must be changed. Thus, even from the most superficial view of the nature of blisters, it evidently appears, that their action is extended over the whole system, and that their employment in diseases, from a persuasion they act as evacnants of serum merely, without proper attention to their other effects, would be a practice not only unsuccessful, but rash, and perhaps even dangerous.

IF this is the case then, the consequences which would result from the application of such a systematic arrangement to use, are sufficiently manifest; and the idea we should form of blisters, or of most other classes of medicines, upon a supposition that the conclusions from thence to be deduced were the foundation of judgment, would, almost in every particular, be erroneous. But if, from methodic arrangement, as applied to the investigation of the nature of medicines, an erroneous idea only can be obtained, it is needless to add how much any reliance upon it would



would be apt to misguide in practice. It may, therefore, upon the whole, be concluded, that, although methodic arrangement, upon the supposition a perfect system could be obtained, would be of the utmost utility in giving a clear and connected idea of the means of cure in general; yet, as the knowledge to which inquirers have hitherto attained is not sufficient to admit of it in that degree of perfection, it would be a difficult, perhaps an impossible matter, to attempt any general system which would be useful, or even not prejudicial.

IF this objection against the writings of those who have treated of the *methodus medendi* on a general systematic plan, is allowed to be well founded; on this account, as well as for the reasons formerly given, what has been expressly written upon the subject of Therapeutics may be considered as a less sufficient foundation for obtaining the knowledge of that branch of medicine, which is necessary to the cure of disease, when it is meant to be followed out upon any consistent or rational principles.

IF,

IF, however, not only these writings are of themselves defective, but besides this the defect is not to be supplied by writings on the other branches, by those more especially on the *materia medica* and on special therapeutics, or what are more commonly termed *practical writings*, the proposition formerly laid down; that this branch of medicine, notwithstanding its utility, and almost immediate connection with the grand purpose of the healing art, is still involved in greater obscurity than any other, will not be questioned. The imperfect state then, as well as the importance of this subject, may be considered as powerful inducements to attempts towards farther improvement.

C H A P.

## C H A P. II.

*Concerning the Distribution of the different Articles of the METHODUS MEDENDI into independent Associations or Classes.*

THE innumerable observations which the practice of all ages has afforded upon the effects resulting from almost every means of cure employed in disease, especially when to them are added the experiments instituted solely with a view of investigating the properties of particular medicines, can scarce be questioned to afford sufficient data for carrying the theory of their action to an equal degree of perfection as the other branches of medicine. What is principally required towards improvement on this subject, therefore, is not so much the addition of new facts, as a judicious selection of such as will admit of undeniable proof, and a proper application of these to the formation of general rules. The first step then in the progress towards improvement here,

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will consist in the formation of a proper plan for generalising and applying these facts. It has already been observed, that, among the various medicines or modes of cure, there are many which in their nature seem to have a good deal in common with each other. These, although not similar in every particular, operate very much upon the same general principles; on this account they come to be fitted for the same general intentions of cure: Such an assemblage of individuals may be considered with much greater advantages taken together than disjoined; by this means the labour attending the study will be greatly shortened, and repetitions, which would otherwise be almost endless, entirely avoided. It can scarce be questioned, then, that the first requisite, in treating of this subject, is the formation of such associations.

BUT while, on the one hand, it would be tedious and improper to treat of the operation of every mode of cure separately and distinctly; so, on the other, there would be an equal error from the formation of very general associations. By this means the labour indeed might  
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be shortened, but the general doctrine of the class would ill apply to all the individuals; and therefore would be an imperfect method of explaining their mode of action. Where indeed associations less general are adopted, it may be objected, that no proper distribution of individuals can thus be obtained: If, for example, emetics, cathartics, diaphoretics, or such similar classes, were taken as the highest associations, it may be alledged, that there are many individuals, which, with equal propriety, fall under several of these classes; and on this account not only will confusion arise, but the opinion delivered of the operation of individuals will be defective and imperfect,

To this, however, it may be answered, that, although there are individuals with propriety falling under several such distributions; yet the powers which they possess as operating in one particular mode, are so very considerable as greatly to outweigh their other properties; and, where this is not the case, the different effects resulting from them, in consequence of which they have a title to belong to several classes, are produced either from

a difference in the quantity used, in the mode of exhibition, or from the particular management of the patient under their operation: But, as far as the diversity of effects results from these causes, they may, in fact, be considered as different individuals. In this point of view, therefore, no impropriety can be inferred from their belonging to more than one class; and in fact, medicines, when applied to use, if employed with any rational intention at all, are given with a view of their operating as belonging to classes not more general.

INSTANCES of individuals belonging to a plurality of classes, where the seeming inconvenience thence resulting cannot be answered in one or other of these ways, are but few; and, when they do occur, the difficulties thence arising are but of small account, when compared to what would have been the consequence of more general associations. In the formation of associations, then, such medicines are to be reduced to one class, as possess the same general mode of operation, as answer, in some measure, to a precise and limited definition,



definition, as are fitted to the same common purposes of cure, and to the regulation of which in practice the same general maxims will with propriety apply.

FROM reflecting upon the great number of individuals which may be employed as means of cure in disease, it may, indeed, be concluded, that associations formed with these conditions should both be numerous and unequal; numerous, as the diversity of individuals will afford great variety in the general mode of operation; and unequal, as, while many individuals are possessed of the same common properties, there are others which seem to operate in a manner peculiar to themselves. But, from the latter of these causes no inconvenience will result, and, without the former, truth cannot be investigated; as far, therefore, as this is an objection, it is unavoidably connected with the nature of the subject.

THE number and inequality of the classes, however, are objections less strong against this general plan, than the difficulty which will attend the formation of associations with these conditions.



conditions. From the want of a thorough knowledge of individuals, the associations which can be formed, will, in many instances, be deficient, wanting a variety of articles; which should, with propriety, be referred to them; in others, they will be redundant, comprehending individuals which by no means belong to them. But the inconveniencies resulting from this difficulty, are in common to this species of arrangement with every other; and cannot, therefore, be considered as any objection against it in particular. Difficulties and imperfections will attend arrangement in every science; to expect it without these in any branch, would be vain and fruitless.

THE reduction, then, of the different articles employed in the *methodus medendi* to independent classes, formed from a sameness in properties, and in some measure analogous to the natural orders of botanists, as founded more on the general character, than on any artificial marks, although not free from these objections, may still, perhaps, be the mode of arrangement best fitted for treating this  
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subject, or delivering the doctrine of means employed in the cure of disease. By a separate and distinct consideration of independent associations thus formed, treating of the different classes as unconnected with each other, the inconveniences resulting, on the one hand, from a particular treatment of every individual by itself, and, on the other, from general systematic arrangement, will be equally avoided. This method will neither tend to convey any false idea of the operation of medicines, nor will it lead to prolixity or repetition, by disjoining the consideration of those naturally connected.

CHAR.

## C H A P. III.

*Concerning the Method of inquiring into the Nature of Classes.*

**I**F, from what has been advanced in the preceeding chapter, it is admitted, that, in an attempt towards the improvement of Therapeutics, the first object of attention is the formation of the particular modes of cure into independent associations; it will naturally occur, that, these being thus formed, the next requisite is, that some proper plan should be delivered, by which the nature of each may be more fully investigated. The most proper method for delivering the consideration of the classes, is, perhaps, not to be obtained with less difficulty than the distribution of individuals for their formation. But, while an unexceptionable order is not to be expected, there are, perhaps, few without some advantages: To obtain these, therefore,

therefore, as much united as the nature of the subject will admit, is an object both attainable and important; and, for that reason, well merits consideration. What is chiefly to be aimed at in method here, is to conduct the consideration of each class, in such a manner, as to have a full and connected view of the mode of operation of those individuals comprehended under it, that, from thence, all the purposes to which it can be applied may be with ease deduced,

To obtain this end, it would seem necessary to consider, under a separate and distinct head, what may be termed the NATURE of each class. Under the term here used, may be comprehended the whole theory of the operation of any class, as far as that can be deduced from obvious facts, or undeniable observations, without, at the same time, perplexing the inquiry into its mode of action with any remarks upon the supposed or real purposes to which it can be applied in the cure of diseases.

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THOSE effects of any class of medicines, from which alone its nature can be investigated, are such, as it will produce in the animal frame, whether in a sound or morbid state. In considering the nature of a class of medicines, then, its more general effects only fall under our examination; and, by fair deductions from these alone, it can be applied with a view to obviate or remove morbid conditions in the body.

To this method of attempting to lay a foundation for investigating the use of any class of medicines, by entirely confining the inquiry to the consideration of its more general effects, and even, in some measure, excluding these varieties in the mode of action, arising from morbid conditions in the system; it may, indeed, be objected, that the operation of many medicines, as acting in the cure of diseases, depends entirely upon the existence of peculiar morbid states. It is frequently, in consequence only of such a state in the system, that medicines come to be productive of the changes which are fitted to remove the morbid affection occasioning the disease. It cannot,

cannot, indeed, be denied, that in some instances this does occur ; and, on this account, in treating of the nature of classes, an absolute exclusion of morbid conditions will not in every case be practicable. Where, however, what is necessary to be said of these, as well as of the peculiarities arising from singularity in constitution, can be referred to the consideration of the USE of the class, they will be treated of with more advantage, when its application to the proper morbid conditions on which they depend, is explained.

By this means, that confusion, which would be the necessary consequence of blending the general with the more particular effects of a class, will be avoided, while, at the same time, the consideration of the effects of the class will not be less complete. The facts then chiefly to be employed when treating of the nature of any class, are those effects most universally produced on the system; introducing only the consideration of morbid conditions, where the nature of the class is such, that its action entirely depends upon the presence of these particular states in the system.

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IN conducting the first general head of inquiry here proposed, the investigation of the nature of a class, before entering into any detail of its effects, or attempting to deduce from these any conclusions, it will be necessary previously to determine of what the Class properly consists. On this account, the inquiry into its nature must be begun with a *definition*. Those marks by which alone any class of medicines can be defined, are undoubtedly its more general and obvious properties, both as being most readily detected, and as rendering the definition such, that it will apply to all the individuals meant to be comprehended under the association.

BUT, in order to render a definition strictly logical, this is by no means all that is required. A compleat definition should be such, as not only applies to the thing to be defined, but, besides this, excludes every thing not meant to be comprehended under the term. It is, however, certain, that the more general and leading properties of the different classes of medicines are not unfrequently possessed by substances, which, from particular circumstances,



circumstances, have not, or perhaps cannot, either with safety or prudence, be exhibited to answer the purposes in medicine for which the class is intended. These therefore will not, in every case, be of themselves sufficient to constitute a proper definition. But, if the different modes of cure are to be treated of under so many independent associations, it is necessary that these should be separate and distinct; and therefore, that the definition of each should be limited and precise. If, however, this precision cannot be obtained from the general properties of the class itself, other marks for this purpose must be sought for. To obtain these, recourse must be had to those substances most ready to be blended with the class; and what would in them seem the most obvious ground of distinction are these properties, by possessing which they are rendered unfit to answer the purposes of the class. For obtaining a proper definition then, where the general properties are not of themselves sufficient, such negative distinctions must sometimes be introduced.

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AFTER attempting precisely to ascertain what is meant to be comprehended under any class, the next subject of investigation naturally presenting itself, is to determine the more immediate, or what may be reckoned the *direct effects* resulting from its employment. This head of inquiry is very universally treated of, as comprehended under the general term of *modus operandi*, where the consideration of the more direct effects is conjoined with that of the subsequent changes in the system resulting from them. But to evince, that there is in nature a foundation for a distinction betwixt the two, and for a division of this general head so commonly adopted, it will be necessary only to have recourse to instances from particular classes. Thus, in the class of Emetics, it will be allowed, that there is a material difference betwixt the action of any individual belonging to the class, as tending to produce vomiting; and the effects which the vomiting, when produced, has upon the system.

But it is not more evident, that there is a foundation in nature for this division, than  
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that advantages will result from its being instituted. In this way the natural progress of effects will come to be observed, the more obvious facts will be separated from conclusions to be obtained only by the help of reasoning; and the foundation of indications, which are very generally deducible from the more permanent changes induced on the system, will be less disjoined.

It is not, however, pretended, that a distinction here can be accurately traced out, or that precise limits betwixt the two can be ascertained. The more immediate effects of medicines, and the changes they produce, are in a continued series, one depending upon another; it is therefore impossible, in many cases, to determine where the proper point of partition should be fixed. But, while no inconvenience will result from referring what are doubtful either to the one head or the other, manifest advantage may, at the same time, be obtained from separating those which belong to different heads. The more immediate or direct effects, then, must be allowed to merit a separate consideration.

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IN treating of these, the circumstances chiefly to be had in view, are:—An attempt to prove the existence of every one enumerated. This may very generally be done, either from the testimony of the senses, as the effects themselves fall under the observation of bystanders, or from the feelings of the patient to whom they are administered.—An endeavour to ascertain the causes from which they arise. These are to be sought for in the peculiar qualities of the medicines employed, and in the laws regulating the animal system, from which, in consequence of a particular action upon the body, determined effects are produced.—And, lastly, a trial to determine, as far as it can be done, the comparative degree in which the effects, as produced by the class, do take place. This can only be judged of from the obvious phaenomena with which they are attended, and the probable causes on which they depend.

AFTER what has been urged, in order to shew the propriety of considering the more immediate effects of medicines, as a separate and distinct head, from the subsequent changes they produce, it would be needless to add,  
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that to the former of these, the consideration of the latter must be immediately subjoined. When it is considered, that from THE CHANGES IN THE SYSTEM, the purposes to which medicines can be applied for the removal of particular morbid affections are deducible, this must be allowed to be a part in the doctrine of means, claiming particular attention ; as it is in a great measure the foundation of all practice, upon a rational or dogmatic plan. In order, therefore, to arrive at any degree of certainty, in the application of medicines to use, it is necessary, that every change, arising from each class, should be particularly pointed out.

To a very full and particular enumeration of these changes, it may, indeed, be objected, that, while the enumeration itself is not to be obtained without considerable labour, the number of changes which, in this manner, would necessarily come to be mentioned, would frequently give rise to considerable perplexity ; and, besides this, many of them would be so inconsiderable, that from thence no indications could be deduced. It cannot,  
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indeed, be denied, that, on some occasions, all these objections will, to a certain degree, hold good: The inconveniencies, however, thence resulting, are inconsiderable, and by no means sufficient to outweigh the advantages to be reapt from a full enumeration. Improvement in any part of science is not to be expected without some difficulty. The perplexity which will occur from the number of changes, arising from any class of medicines, will but rarely happen: Changes are seldom so numerous as to afford any foundation for this; and, even when the number is such as it might be imagined would produce it, the inconvenience may be, in a great measure, if not entirely, obviated by proper arrangement. And although, perhaps, there may be changes in the system, resulting from every class of medicines, which are of themselves no proper foundation for its employment, with a view to fulfill any indication; yet frequently they co operate to the production of effects, to which, when taken singly, they are inadequate. Without an acquaintance with these, therefore, the effects of the class, as fulfilling particular indications, cannot be accounted for up-

on proper principles. Instances of changes, indeed, may be mentioned, which cannot, with justice, be supposed to act even as assistant causes, in answering any of these indications which the class is employed to fulfill. From these changes, however, cautions may often be suggested, which are to be observed in the employment of the class; or from thence, we may learn, that, in certain morbid conditions, its use is altogether inadmissible. In either of these views, to which such changes, apparently supernumerary, may be applied, the full enumeration here proposed may be considered as intimately connected with the use of the class.

WHAT is necessary to be learned with regard to each change in the system, may be conducted under the same heads of inquiry, as were proposed for the consideration of the more immediate effects of the class.—That any affection of the system may be admitted as a change resulting from a particular class of medicines, a proof, that from these it actually does occur, is in the first place necessary. The proof here is, for the most part, not so easy



easy a matter as in the case of direct effects : The changes themselves do not in general fall under the examination of our senses; while the marks, which may be supposed to indicate their existence, are frequently of such a nature, that they may arise from different causes. For these reasons, a proof, amounting to demonstration, is, on many occasions, not to be obtained. But it frequently happens, that there is a concurrence of circumstances, from which changes may reasonably be inferred; that these circumstances have been ushered in by the pre-existence of causes sufficient to produce them ; and that they are followed by consequences in the system evidently deducible from them. In these cases, the proof, although not absolute, will arrive at a degree of probability next to certainty. From probable reasoning then, a proof of such changes in the system, as follow from the more direct effects of medicines, may be deduced; and, where the presumption is strong, their existence may be admitted, although demonstrative proof cannot be obtained.—The actual existence of each change being determined, as far as the nature of the subject will admit of it;

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that a more perfect knowledge of it may be obtained, and frequently as a farther proof of its reality, it is necessary to inquire into its cause, and to endeavour to determine in what manner it arises from the direct effects.

—After these steps towards ascertaining the precise nature of each change, that a more perfect judgment may be formed, to what extent it may with confidence be applied in reasoning as the foundation of indications, it is necessary, that the degree in which it occurs should be likewise known; an attempt to determine this, therefore, becomes a farther subject of inquiry.

AFTER having attempted, by a proper definition, to settle what belongs to each particular class of medicines; by considering the direct effects resulting from the individuals comprehended under it, and the changes in the system consequent from these, to explain fully its mode of action; what falls under the general head of the nature of each class may seem to be sufficiently treated of. But it is to be remembered, that, in every class of medicines, under which any great number of individuals

dividuals can be comprehended, even although the class may be as natural as can well be expected, yet remarkable differences will occur. And, indeed, this must infallibly be the case, unless the associations were swelled to a number so great, as intirely to frustrate the intention of their formation. From this circumstance; however, of differences occurring among the individuals belonging to the same class, it will follow, that what can be alledged, with regard to it in general, will be a less perfect account of every individual it contains.

IN some degree to obviate this, without the more tedious work of studying the history of each individual, the most ready method seems to be, to divide the class into inferior associations or ORDERS, as far as these can be formed from a correspondence of properties in the individuals referred to them.

IT is not necessary that the properties, distinguishing particular orders of classes, should be such as have any tendency to produce the general purposes of the class. On the contrary, a ground of distinction will here most readily be had, from properties altogether unconnected with these powers by  
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which they operate, as belonging to the class under which they are considered : And where individuals occur, belonging to more classes than one, the qualities they possess in common with others will afford the best distinction into orders. From these sources, then, the particular orders falling under each class, where a subdivision is necessary, are to be determined.

THAT the subdivision, thus instituted, may supply the place of a history of each individual, an account of the common properties of the order will be necessary. A correspondence among the different articles, reduced to one order, is chiefly to be inquired after in the kingdoms from which they are taken, the *menstrua* by which they are acted upon, the form and dose in which they are most commonly exhibited, the treatment necessary under them, and, lastly, the peculiarities of their operation. Although it would be, perhaps, in some measure, superfluous labour, to give a complete catalogue of all the individuals comprehended under each order, and may be considered as more properly falling under the *materia medica*,

*medica*, than the general doctrines of cure; yet, as a proof of the propriety of instituting the division, and as a proper foundation for observation and experiments, in order to determine the justice of the character given of each order, it will at least be necessary to point out a few individuals, as examples of what belong to it. By the consideration of this fourth head, intended to supply the defects of the preceeding ones, the nature of each class may be fully investigated.

## C H A P. IV.

*Concerning the Method of Inquiring into the Use of Classes.*

THE nature of each class of medicines being investigated in the manner proposed, it follows, that some application to practice should be made of the information from thence obtained. This may be treated of under the general title of the USE OF THE CLASS. The term here employed, however, is not to be considered as taken in a limited sense, nor as confined merely to what may be said of the use of the class, when employed in particular diseases; but must be understood, as extended to the whole general rules which respect its application, and as comprehending even the consideration of those morbid conditions, under which its exhibition is

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inadmissible. The use of a class then, taken in this general sense, is a subject, in which a proper plan will be particularly necessary, and, indeed, in a great measure essential to the attainment of such advantages as may be expected to result from the inquiry. Such a subdivision of this general head then, as will most facilitate the labour, is much to be wished for, and highly requisite.

THE first inferior division, which would naturally seem to fall under this general head, is the USE of the CLASS, more strictly speaking, or its effects in the cure of diseases. In ascertaining these, the first subject of inquiry will be an investigation of such indications of cure as from the nature of the class it may be supposed fitted to fulfill.

THE term INDICATION, here employed, is used, if not by accurate medical writers, at least in common medical conversation, in a very vague and unlimited sense. Previous, then, to pointing out any plan for the investigation of these, it will first be necessary to say, in what particular sense the term is here adopted.



adopted. Those medical writers who have treated of terms with greatest accuracy, have, on this subject, employed three, *INDICANS*, *INDICATIO*, and *INDICATUM*: That a more distinct idea may be formed of any one of these, it will be necessary to offer some explanation of each. By the first then, or *INDICANS*, is meant a morbid state existing in the system, which points out the necessity of a change. By the second, the *INDICATIO*, is understood, that change which must be produced in the system, for the removal of the morbid affection. And, lastly, the third of these terms, or *INDICATUM*, signifies the means by which this change may be obtained. From the limited sense in which the term *INDICATION* is here proposed to be adopted, it appears that the more general, and perhaps unmeaning indications, such, for example, as the removal of a present paroxysm, the prevention of its return, or the alleviation of symptoms, will be intirely excluded. These, indeed, may be reckoned sufficiently proper parts in a plan of cure; but can never, with any propriety, be esteemed what should be termed indications. These, since they do not even descend so low

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as to point out any particular morbid affection, although, perhaps, proper general sources of indication, must be considered as more general than the *indicantia* themselves.

THE term INDICATION, as here meant to be adopted, must always pre-suppose the existence, and even the knowledge, of a particular morbid state occurring in the system. When, therefore, in treating of the effects of any class of medicines in the cure of diseases, an investigation is proposed of those indications, which, from the powers ascribed to it, as deduced from its nature, it may be supposed fitted to fulfil, an enumeration is required of all such changes as it is capable of producing in morbid states existing in the system, which have a tendency to their removal.

WHEN an attempt was formerly made to point out the plan best adapted for considering the nature of each class of medicines, it was alledged, that the only proper foundation, from which their application for the removal of a diseased state can be deduced, is a just view of those effects they are capable of producing

ducing in a sound state. From these, then, the indications of cure, to answer which any class of medicines can be employed, must be drawn ; the changes, which they can produce in morbid affections, being, as it were, the product of those which they are capable of inducing in the system in general. But, if these are taken as the sources of indication, when it is considered that morbid affections, at different times existing, are very various, arising from causes almost innumerable ; it might from thence be inferred, that, as every change in a sound state will be productive of several in morbid affections, the indications, which may be answered by each class of medicines, would swell to a very great number. And, indeed, this would in fact be the case, could the different effects resulting from any class of medicines be produced either singly or combined, at pleasure. A production or combination of effects in this manner, however, cannot be obtained. There are few classes of medicines in which some effects are not destroyed, or, at least, more than counterbalanced by others immediately succeeding. Those changes of the system, then, which occur

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cur in a small degree only, may, in point of indication, be intirely overlooked ; and this the rather, if there are, at the same time, other considerable changes of a different tendency, which, from the employment of the remedy, must unquestionably follow.

IN attempting to determine, then, what are the proper indications which any class of medicines is fitted to fulfil, the changes which it is capable of producing, taken singly, cannot be looked upon as the proper sources from which these should be deduced. As the proper sources from which may be drawn these indications which any class of medicines is capable of fulfilling, it is necessary, that the changes of the system which it produces should, in some measure, be generalized : And, from the more remarkable and leading changes, or from the united effects of several, they can only with propriety be deduced.

THE particular indications, which can be answered by any class of medicines, being thus discovered, is one, and that a very material step towards its proper application to use ; it  
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is, however, by no means the only thing which for this purpose claims attention. A circumstance, if not of equal weight, at least well meriting consideration, is an *illustration* of the nature of the morbid affection.

THE same morbid state, it is well known, may arise from causes very different; when produced, indeed, it may be alledged, that, let the cause be what it will, the affection is the same. But notwithstanding this, when the causes by which it has been produced are different, its removal may, with more ease and greater certainty, be effected in one way than in another; as these still subsisting in the system, often render its continuance more obstinate. A remedy, therefore, which may with propriety and advantage be employed for producing a change in a morbid state in certain conditions, is not to be considered as universally fitted for that purpose. And when, from considering the nature of any class of medicines, a fair conclusion can be deduced, that it is fitted to produce such a change in any morbid state as may tend to its removal, the propriety of its employment for that purpose is still only to be determined by a proper view of the particular variety of that morbid



morbid state which presents itself. It follows then, that, after the indications are enumerated, an illustration of the morbid state, which is the particular foundation of each, must be subjoined.

THE varieties of any morbid state being in this manner pointed out, and those to which the indication refers being particularly illustrated; that a more distinct idea may be formed of the use of any class, its *mode of action*, as fulfilling the indication, is another necessary subject of inquiry. After a full illustration of the nature of any class, and after pointing out the particular source from which the indication itself is deduced, what is here proposed may indeed be considered as, in a great measure, superseded. But, as it has been alledged, that the only proper general sources of indication are the combined effects of several changes in the system, it is evident, that no proper idea can be formed of the manner in which any indication is fulfilled, without considering the share which is to be attributed to each of its causes. Besides this, although an indication is referred to a particular

lar source, and from thence chiefly may with justice be accounted for; yet other effects resulting from the class may also, in some degree, tend to its production. And still farther, although an indication may, with propriety and advantage, be answered from the use of a particular class of medicines; yet these may produce some changes in the system, which have a tendency rather to counteract the intention. That its powers, then, to answer the end proposed may be rightly understood, these also must be taken into account; and will be considered to greatest advantage, when the means, by which the indication is to be fulfilled, are inquired into. For these reasons an explanation of the mode of operation in the class, by which it comes to be adapted for each indication, cannot be considered as intirely superfluous, and will even be a necessary addition to the illustration of the morbid state on which the indication depends.

OF the various indications which may be pointed out, as steps towards cure in disease, it need hardly be mentioned, that some will occur in many cases, and are of such a nature,

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that the employment of medicines to answer them is requisite in daily practice ; while, on the contrary, others, although founded on morbid affections, in some instances to be met with, yet very rarely occur, and may even be built upon affections, which, although conceivable and possible, have never in fact been observed : This being the case, however, all indications are not to be considered as equally important; and a precise knowledge of the extent to which each may be applied in practice, is to be looked upon as no useless subject of inquiry. But, useful as the inquiry may seem, an attempt to it is not to be hazarded, till some regard has first been paid to the possibility of attainment. Although it can, by no means, be represented as an end altogether unattainable, to investigate the various diseases, and circumstances in diseases, in which the fulfilment of any particular indication is requisite; yet to any one who considers the many diseases to which the human body is incident, and the almost innumerable variety produced in these, from differences in age, sex, temperament, climate, and many other circumstances, it must appear obvious, that,

that, to execute this with any tolerable degree of accuracy, would require much more labour and attention, than the result of the inquiry can be supposed to merit. An attempt, therefore, to prosecute this investigation in its full extent, would still be no less difficult than ill judged. But, because it may seem improper to aim at a complete view of all the morbid affections under which every indication deduced from the nature of the different classes will apply, the application of indications to particular diseases is not, on that account, to be totally neglected. The importance of any indication, and the attention due to it, may, in some degree, be inferred from a view of this subject, although partial, and, at the same time, such a one as can with ease be obtained. The last step, then, in the consideration of each indication should be, to mention some diseases, in which the class of medicines treated of can be employed to answer the intention proposed.

FROM the various heads under which it has been proposed indications should be treated of, a proper idea of each, deducible from the nature

ture of every class, may be obtained; and, in this manner, the application of the class to use, as far as a knowledge of that can be had from theoretical reasoning, may, with advantage, be learned. The information in this way to be obtained, concerning the effects of medicines in the cure of diseases, can neither be represented as inconsiderable nor unimportant. But in medicine the data, from which reasoning is to be deduced, are by no means arrived at that degree of certainty which is requisite, before we can assume them as principles, and rely on them alone. In our inquiries into a subject so useful, then, we must not rest satisfied with these.

NOT less to ascertain the truth of what may be asserted with regard to the indications, than to supply the defects under which that view of the subject may labour, it will be necessary to consider the use of each class, as employed in some particular diseases. By this means the result of inquiry, with regard to indications which any class of medicines is fitted to fulfil, will be put to a still farther proof than the test merely of theoretical reasoning:

soning : From this it will appear, that theoretical reasoning, however just and well established it may seem, is frequently overturned by particulars in the oeconomy, either unknown or overlooked : From this test also, the truth of indications, inferred from, perhaps, doubtful reasoning, will be confirmed beyond possibility of dispute. But practice and experience, as recorded by the most candid and judicious observers, and deducible from the use which has been made of any class of medicines in particular diseases, is not merely useful here, as being the criterion of truth for the indications deduced from the nature of the class. It will serve equally, on the one hand, to crop the luxuriances resulting from theory ; and, on the other, to supply its deficiencies. It has already been observed, that indications, deduced from the nature of the class, will often point out practices which are at least uncommon : These, although readily inferred from a theoretical view, will frequently be found not confirmed by experience. Besides this, it will often happen, that classes of medicines are employed for purposes which do not fall under any of the indications mentioned ;

oned; from considering the effects reaped from such a class in particular diseases, these will appear. In this manner of investigating indications, then, from the success with which the use of any class has been attended in practice, the various purposes to which it may be applied, which a theoretical view of its nature does not suggest, may be learned. A still farther advantage to be reaped from this consideration, is, that, by this means, an opportunity will be afforded for investigating the principles upon which depend the good effects of any class of medicines in many cases, where no theory is given, either to point out the intention of its use, or explain its operation. As a means, therefore, of determining the propriety of indications deduced from the nature of any class; of supplying indications, from that view, deficient; and of investigating the principles of success, where the facts concerning its use are established, it will be necessary to subjoin to the consideration of the indications themselves, an inquiry into the employment of every class in some particular diseases.

To treat of the use of a particular class of medicines in every disease in which it has been employed, or even in the greatest number of those in which it is very generally used, would be a field not less extensive, a subject not less difficult in execution, and a piece of knowledge, when obtained, not less inadequate to the labour of inquiry, than was formerly asserted of an attempt to ascertain all the diseases, or states in these, under which any particular indication falls to be fulfilled. What has been urged, then, against considering the one on the most extended plan, will apply equally to the other: In this case therefore, as well as the former, a partial consideration only is proposed. A full examination of this subject would lead to prolixity and repetition, while all the advantages which are to be reaped from it, may, in a great measure, be obtained, from considering the use of each class, under a few of those diseases in which it is most commonly employed. These are to be treated of one by one, and may be considered in any order, which the frequency of the exhibition of the class, or the importance of the effects reaped from it, seem to suggest.

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AN investigation in this manner of the effects resulting from the employment of any class of medicines, may seem sufficient to point out the cases in which it is to be applied in practice. But, as it has already been observed, that associations, even the most natural, admit of very considerable variety, and as it has been proposed, that, where any remarkable variety in effects occurs, a division should be instituted into inferior associations; in classes where such orders are formed, this diversity of virtues naturally points out another subject of inquiry, previous to the application of the class to use. Having established, therefore, the propriety of the employment of any class in general, it is, in the next place, necessary to consider *those circumstances* which may determine us to the employment of one particular order, in preference to others.

THE principal source from which those circumstances which may influence us in the choice of a particular order are to be derived, is the nature of that change, which, in order to the restoration of a sound state, it is proposed should be produced in the system. As  
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the different orders, into which any class of medicines are divided, vary in their effects; so it is but reasonable to imagine, that, from this variation, some of the orders of a class will be more particularly calculated to produce the changes required than others: From comparing then the nature of the indication to be fulfilled, with the powers ascribed to the orders, a judgement may be formed of what is best adapted to each particular purpose.

ALTHOUGH the nature of the particular change required in the system may be looked upon as the principal foundation of choice; yet other circumstances, which may, in some measure, influence our determination, are not to be over-looked; and, amongst these, the degree of change necessary is a material one. To the fulfillment of indications, indeed, the highest degree of change we are able to produce is for the most part requisite; this, however, does not universally hold, nor is a change in the system to that degree, which an indication may seem to require, in every case advisable or proper. A particular change induced in the system, when happening only

to a certain degree, may be the most ready and effectual means for removing a morbid affection; yet, when produced in a higher degree, so far will it be from being followed by its former effects, that, if it has any action at all upon the affection, its tendency will rather be to rivet and increase the evil: Attention to degree in such cases, then, is a circumstance principally requisite. But, besides this, attention here is still farther necessary, even in those cases where the highest degree of change which can be produced from the class, is not more than sufficient for answering the indication required. The fulfillment of any indication is, by no means, to be attempted in every case, in the most ready or expeditious way: A change which in one may with safety and ease be immediately effected, in another, can only be wished for by slow and imperceptible degrees. Where it is necessary a change should be produced in this manner, the end will most readily be obtained from the employment of that order best adapted to it. Amongst the circumstances, therefore, determining to the choice of a particular order, the degree of change requisite or proper is always to be

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be regarded, which, perhaps, little less than the nature of the change itself will here influence the determination.

THE nature and degree of changes requisite are, in most cases, the principal, perhaps, in some, the sole foundation of choice, with regard to orders. But, although, in ordinary conditions of the system, these will afford sufficient data for this purpose; yet, from diversity in habit, the mode in which it will be most expedient to answer any indication must be varied, not only in different patients, but even at different periods in the same disease: From this it follows, that, on many occasions, another source, from which circumstances determining to the choice of orders are to be deduced, is the condition of the patient. Besides these sources, it is not denied, that a variety of circumstances may be deduced from others, or may occur in particular cases. What have already been mentioned, however, may be esteemed the principal. And, perhaps, in a general view of what respects every class, those circumstances resulting from the nature of the change, from its degree, and from the

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condition of the patient, can alone with propriety be considered.

THE necessity of employing any particular class of medicines for the removal of a diseased state, and the superior advantages to be reaped from the use of any order in preference to another, being in this manner determined, the choice of individuals themselves must be more limited and easy. Having determined upon the use of a particular order, it might seem natural to subjoin the consideration of those circumstances, which may direct to the choice of some individual belonging to it. The data, however, from which such a choice is to be made, can only be had from the history of the individuals themselves; and, therefore, it is not to be learned from what is advanced, merely respecting the nature of classes and orders. But, besides that, on this account, an impropriety would follow from immediately proceeding to the choice of individuals, that order would still farther be culpable for another reason. The foundation upon which a division into classes is principally built, is a similarity in effects; and the advantage chiefly to be reaped from

from it, is the abridgement of an otherwise tedious inquiry, which would be crowded with endless repetitions. It will readily be allowed, that, in the employment of every mode of cure, particular cautions are necessary. There are, no doubt, some which may be considered as peculiar to each individual : But, as in laying down the general doctrines concerning the indications, to answer the purposes of brevity, and to avoid repetition, the consideration of several individuals was proposed to be conjoined ; so, in like manner, the cautions which are necessary to be observed of every individual taken separately, may be more compendiously delivered, by treating of those which apply to the whole class. Having considered, therefore, the general effects of any class in the cure of diseases, and pointed out those circumstances from which the preference due to a particular order is to be deduced, it follows, that the next subject of inquiry should be an investigation of those *cautions* which are to be observed with regard to the use of the class.

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THE multiplicity of circumstances, by which the action of medicines may be affected, will give rise to so much variety in the cautions necessary, as cannot easily be comprehended under general heads. A full detail, therefore, of every circumstance, which should be attended to in the use of any class, is by no means to be expected. Many of these, however requisite or proper they may be on particular occasions, could not, with propriety, be included under the general consideration of a class, and must be rested wholly in the judgment of the practitioner. There is, however, in this case no absolute necessity for an entire reliance upon the suggestions of prudence: The observations and facts of former practitioners will here, as well as in other cases, in a great measure, facilitate and add certainty to the inquiry. But, what the judgment and experience of others has pointed out, will be viewed to greatest advantage, when the particular facts enumerated are reduced to a few general heads.

AMONG the various sources from which cautions, in the employment of any class of medicines,



medicines, may be deduced, what would seem chiefly to claim attention, as suggesting these, is the nature of the class itself. The accidents here to be guarded against are, in some measure, the natural consequence of the remedy employed; the rules, therefore, to be laid down respecting them, will apply more generally in all circumstances, and, on that account, will naturally occur to be first taken notice of.

As the action of every medicine, and consequently the cautions to be observed in its employment, will undergo remarkable variation from peculiarities in the habit in which it is used, the condition of the patient is deservedly to be esteemed another source of cautions, and, perhaps, affords a foundation for more numerous observations than the preceding. Under this may be considered whatever is to be observed with regard to the use of any class, as suggested by the nature of the disease in which it is to be employed; by the age, sex, or temperament of the patient; or what, although less obvious, is not less important, by peculiarities in constitution, which  
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can be detected only by former experience or circumspect procedure.

To the head of cautions may likewise, with propriety, be reduced, those general rules of treatment to be observed during the use of any class. The necessary regimen, then, comprehending the directions which are requisite with regard to exercise, diet, temperature, and such like circumstances, may be subjoined as a third head of caution to the two already mentioned. As far, then, as the cautions to be observed, with regard to classes of medicines in general, are deducible, either from the nature of the classes themselves, from the condition of the patient, or from the necessary regimen, they may, with propriety and advantage, be considered in a system of general therapeutics; and, by a prosecution of the subject to this extent, we may obtain the useful, without being perplexed with the intricate. But, in every class of medicines, it must be allowed, there are many cautions which fall under neither of these heads; especially, if we here comprehend, not only such as belong to the class in general, but those likewise respecting indi-

individuals. These, although perhaps requisite in practice, yet, as they cannot be introduced without embarrassing the subject, will be better referred to the dictates of reason and common sense; without the proper interposition of which, all general rules in medicine will be but of little avail.

WHAT may be delivered concerning the use of any class of medicines by treating, in the manner which has been proposed, of its effects in the cure of diseases, of the circumstances determining to the choice of particular orders, and of the cautions to be observed in its use, will fully comprehend every thing necessary with regard to those cases in which it is to be employed. But, besides, the morbid conditions of the body, under which the use of any class of medicines is particularly required, there are many others, in which the effects which would result from its employment are, by no means, to be over-looked. Under this general head of the use of a class, then, the consideration of these must likewise be comprehended.

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HOWEVER numerous the morbid affections may be, under which any class of medicines is indicated; yet still, it is not to be questioned, that there are many others depending upon such causes, that any change resulting from the class will have no particular tendency to their removal. Of these there are many, which, with regard to the class, may, in a great measure, be esteemed indifferent. By this it is not meant, that there does exist any morbid affection, under which we need shew no anxiety, whether a particular class of medicines is employed or not; in every case where these are not particularly indicated, their employment should undoubtedly be refrained from: Where a *placebo* merely is wanted, the purpose may be answered by means, which, although perhaps reduced under the *materia medica*, do not, however, deserve the name of medicines. When a class of medicines, then, is said to be indifferent with regard to a morbid affection, nothing farther is meant, than that it has no peculiar tendency to encrease the evil; while, at the same time, no peculiar benefit can be expected from its employment. But, besides these affections

fections which, in the sense here defined, may be esteemed indifferent, there are others, in which the employment of particular classes is followed by very different consequences; and, so far are they from producing any alteration for the better, that they have an obvious effect in augmenting and rivetting the disease. When the nature of any class stands in this relation to that of a disease, its use, under such a morbid affection, may be said to be contra-indicated; and, unless particular circumstances occur, where the benefit to be derived from the class, on another footing, is more than sufficient to counter-balance its bad tendency, it cannot in these, with propriety, be employed. Diseases; or states in disease; then, which may be said to contra-indicate the employment of any class of medicines, are not meant to be totally confined to those morbid affections, in which its use is altogether inadmissible. But, under the term, as here taken, are meant to be comprehended all such morbid affections as the class, from its nature, has a tendency to increase.

THE various affections, then, under which the use of any class of medicines is not particularly required, and where its employment is only admissible from circumstances, may be divided into those in which it may be said to be indifferent, and those in which it may be alledged to be contra-indicated, as here defined: Although an attentive practitioner will esteem it equally necessary to avoid the employment of the class under both these, provided nothing particularly requires its use; yet, as stronger reasons will be necessary for its being employed in the latter set than the former, advantage may be derived from distinguishing betwixt those which fall under each. Having pointed out the one set, the other will be known of course; and, as the greatest delicacy in the employment of any class is necessary, where it will have a pernicious tendency, the consideration of the indifferent morbid affections may be entirely omitted. In treating, therefore, of what should be comprehended under the general head of the use of any class, after the consideration of the subdivisions already pointed out, the last subject of investigation claiming attention,



attention, is an inquiry into the *contra-indications* to its employment.

AFTER what has already been said, with regard to the method of conducting an inquiry into the nature of indications themselves, it will be necessary to add but little respecting the contra-indications. These, as well as the indications, are to be deduced from the nature of the class; not built upon single or inconsiderable changes, which it might be capable of producing, but rested upon its leading or united effects. After any morbid state is determined upon, as contra-indicating the use of a class, it will be further necessary here, not only to point out the manner in which, during the continuance of such an affection, it comes to be pernicious, but likewise to attempt to confirm or correct theoretical reasoning, as far as proper data are afforded for that purpose, by facts and observations. With the consideration of the contra-indications, treated of in this manner, the necessary inquiries concerning the use of each class may be concluded.

## C H A P. V.

*Of the Method of Inquiring into the Histories of particular Articles.*

**I**F all the articles employed in the *methodus medendi* could, according to the plan which has been proposed, be distributed into any determined number of associations, and where in these any considerable diversity of effects occurred, natural and proper subdivisions could be instituted ; the whole doctrine [of means might be fully considered under the two general heads already pointed out. A proper view of the nature and use of each class would supersede the necessity of descending, in any instance, to the history of individuals, in order to become acquainted with their mode of action, or the general purposes to which they may  
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be applied. The consideration of individuals belongs entirely to the history of the *materia medica*; a subject which, it must indeed be allowed, is intimately connected with therapeutics, or the doctrine of means; yet when taken strictly, and properly understood, is, in reality, separate and distinct from it; the latter giving an account, as has already been observed, of the general doctrines respecting those means to be used in the cure of diseases; the former, on the other hand, treating of the natural and medical histories of the various substances from the vegetable, animal, or mineral kingdoms, which are employed in medicine. It were, indeed, to be wished, that every branch of medicine could be completely treated of, when considered by itself; but, however desirable it may seem to arrive at this, it is still to be looked upon as of less import, than obtaining a full consideration of the subject, which, in every case, must be held to be the first and grand object. Although, therefore, the confusion which must arise from blending together in any degree two separate branches, is a circumstance as much as possible to be avoided; yet, where this intermixture

ture is necessary to the attainment of a complete consideration of the subject, it must be submitted to, as one of those inconveniencies to which, from the strict connection and mutual dependence of the different branches of science, we are inevitably subjected. In the present instance, the end proposed cannot be obtained, upon the plan here laid down for the treatment of the subject, without this taking place in some degree.

WHEN, in place of artificial associations, natural ones are aimed at, it is scarce to be imagined, that there will not occur articles of the *methodus medendi*, which, from the peculiarity of their nature, must stand single.—Under many associations, different articles may be reduced, as possessing every characterizing property of the class; and, being in their nature such, that they can be employed to answer the purposes for which it is indicated, while, at the same time, the account to be given of their nature and use, as far as it can, with propriety, fall under that class, would be both lame and imperfect; in this respect, therefore, they are in some degree in the same circumstances as if they had fallen under no association.—A proper

per illustration of the doctrines applicable to classes of medicines, and of the orders into which they may be subdivided, will, on many occasions, be a sufficiently full and complete account of what is necessary to be known with regard to all the individuals comprehended under it ; while, at the same time, the application of these general doctrines, to particular instances, will neither be obvious nor indisputable.—For these reasons then, to afford an opportunity of treating of individuals comprehended under no proper association ; to be able to enumerate such particulars, concerning some individuals, as could not, with propriety, be mentioned when treating of the general classes to which they belong ; and to furnish illustrations of the general principles, laid down by a more particular application to the individuals themselves ; to the two general heads already mentioned, it will be necessary to subjoin, as a third, the consideration of individuals.

AFTER what has been said, it would be superfluous to mention, that, when it is here alleged the history of individuals must be introduced,

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duced, in order that a complete account of the *metbodus mēdendi* may be obtained, it is by no means to be understood of the history of every individual. In the view which it is here proposed should be taken of therapeutics, these are only to be considered, where their history is particularly requisite for one or other of the purposes already mentioned. Where the introduction of an individual becomes necessary for any of these reasons, the consideration of the subject may very properly be divided into two heads; the first treating of its natural, the second of its medical history.

WITH regard to the *natural history*, it may, perhaps, be true, that, if it could be properly applied, a very full account of it might be highly useful in the treatment of every individual, as tending to a discovery, or even demonstration, of its medical properties. It is, however, to be lamented, that the conclusions which may be deduced from a proper knowledge of the natural history, as far as our present acquaintance with this subject extends, are unattainable to such a degree of certainty, that any reliance can be put upon them. A  
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minute inquiry into this subject, then, as being tedious and not immediately applicable to use, would be both unnecessary and improper. Although, however, a very minute discussion of the natural history is not requisite for medical purposes, yet it is by no means to be intirely overlooked. From theoretical reasoning, the properties which medicines possess may, in some degree, be investigated: The data, however, from whence these are to be drawn fall under this head. The natural history, then, of such individuals, as it may be necessary to consider, is at least to be prosecuted as far as it is the source of theoretical conclusions, with regard to the properties of the substance. For this purpose, it will be necessary to inquire into the sensible qualities of individuals, their chemical analysis, and, where it can be discovered, the natural order to which they belong, as being the chief, if not the only particulars in the natural history, from which useful conclusions, with regard to medical properties can be deduced.

To this short and superficial account of the natural history of any substance, it will be necessary



fary to subjoin, as a second and more material subject of inquiry, its *medical history*. In treating of this, what would seem first to claim attention is, an inquiry into the various degrees of estimation, in which it has been held from its first introduction. The medical history of any substance, then, will be most properly begun by an account of its former use in medicine. There are, however, few substances in medicine, which, in point of reputation for efficacy, have not undergone very considerable changes: It is at least to be imagined, that time and experience will have had some effect, either in detecting former errors, or in confirming and farther investigating real properties. To the account of the former use of any substance, then, it will be necessary to subjoin its present, and, as far as it can be detected, its real character. The character of a substance, however, as differently exhibited, can, by no means, be considered as one and the same. To determine the varieties from thence arising, with a view of completing the history of any individual, it will, therefore, be farther necessary to treat also of its different modes of exhibition, comprehending under this head  
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whatever change in effects is produced by alterations in the form of the medicine, the dose employed, or the treatment under it.

FROM this manner of treating the history of individuals, where it is necessary that it should be introduced, the defects, which might arise from considering only the nature and use of classes, may, in a great measure, be supplied; and, from the prosecution of the whole of this plan, it is apprehended, that the study of a branch of medicine of chief importance in the practice of the art, may be conducted with advantage. That the plan which has been given may be more distinctly comprehended, it may not be improper to review the various steps proposed to be followed, detached from any reasons intended to point out their necessity, or evince their propriety. For this purpose, after the explanation already given, it will be necessary only to offer an abstract of the general heads, without enlarging upon the particulars meant to be comprehended under each, or attempting to point out the method in which the inquiry concerning it is to be conducted.

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An ABSTRACT of the PLAN proposed for considering each of the different CLASSES of Medicines.

# I. CONCERNING THE NATURE OF THE CLASS.

## 1. *A Definition of the Class.*

- a.* The leading properties possessed by all the individuals belonging to the class.
- b.* Particular properties which they do not possess.

## 2. *The direct Effects of the Class.*

- a.* A proof of the real existence of these effects.
- b.* Their causes.
- c.* The degree in which they occur.

## 3. *The Changes induced in the System by the Class.*

- a. b. c.* The same subdivisions as under the preceeding head,

## 4. *The*

4. *The Principal Differences in the Class or the Orders.*

- a. The properties peculiar to each.
- b. Examples of some individuals from each.

## II. CONCERNING THE USE OF THE CLASS.

1. *The Effects of the Class in the Cure of Diseases.*

- a. The indications which may be deduced from its nature.
  - aa. An illustration of the morbid state on which each of these is founded.
  - bb. The mode of operation by which the indication is fulfilled.
  - cc. Examples of diseases, in which the class is used, with a view of fulfilling it.
- b. Observations on its use in some diseases.

2. *The Circumstances respecting the Choice of Orders.*

- a. Circumstances deduced from the nature of the change required in the system.

b. Circum-

*b.* Circumstances from the degree of change which is necessary.

*c.* Circumstances from the particular condition of the patient.

3. *The Cautions regarding the Use of the Class.*

*a.* Cautions from the nature of the class itself.

*b.* Cautions from the condition of the patient.

*c.* Cautions from the regimen necessary.

4. *Morbid Conditions contra-indicating the Use of the Class.*

*a.* An illustration of the foundation of these.

*b.* A confirmation of their reality, from the experience of practitioners in particular diseases.

III. THE HISTORY OF THE PARTICULAR SUBSTANCES BELONGING TO THE CLASS.

1. *The Natural history of an Individual.*

*a.* Its sensible qualities.

*b.* Its chemical analysis.

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*c.* The

c. The natural order to which it belongs.

2. *The Medical History of an Individual.*

a. Its former use in practice.

b. Its present character.

c. The different modes in which it may be exhibited.

aa. The varieties with regard to the form in which it may be used.

bb. The varieties with regard to the dose.

cc. The regimen best adapted to its operation.

C H A P.

## C H A P. V.

*Concerning the Classes into which the different Articles of the METHODUS MEDENDI may be Distributed.*

THE great improvers in medicine, as well as in every other branch of science, seem universally to have been desirous of associating together things which, in their nature, appear to have an obvious connection. In no branch of any science is there a more manifest foundation for this, than among the various individuals employed in the cure of diseases. To this probably it is owing, that a distribution of medicines into classes, is at least as ancient as the first medical writings now extant, perhaps as the art of medicine itself. From the prevailing passion for novelty, as well as from attempts towards further improvement,

provement, it may readily be imagined, that, during so long a period, many different distributions and associations would be formed, and a variety of general terms adopted for expressing them. The associations, thus formed, have very generally been an attempt towards natural ones; and, therefore, are an obvious foundation from whence may be deduced those classes, under which it has been alledged the consideration of therapeutics may be conducted with greatest advantage. From what has already been said, of the number of terms which in medicine have been employed on this subject, it would be needless to observe, that all the associations which have been offered are by no means to be promiscuously adopted. From the same cause also may be deduced a sufficient reason, why it would be no less tedious than disagreeable to assign particular objections against each association, not afterwards to be admitted. But, at the same time, lest it should be imagined, that there are no particular reasons to guide to a proper choice, but that, out of the number of associations in use, it will be sufficient to admit a few only; it becomes necessary,



ry, not only to point out the general requisites in the formation of associations, but to assign also such general reasons for rejection, as will admit of an easy application to particular cases: By this means a foundation will be laid for determining whether the admission of some classes, and the rejection of others, has been from sufficient grounds or not.

THAT the associations here adopted, may be better fitted to answer the end proposed by this distribution of the *methodus medendi*, it is first requisite, that every association admitted be a natural one; by which is to be understood, that the articles comprehended under it possess the same general mode of operation, and that their effects are to be accounted for upon the same general principles. The most natural and easy method of obtaining associations with this condition, would be by admitting a great number, each comprehending only a few articles: By having recourse to this expedient, however, the formation of associations altogether would, in a great measure, be frustrated. A second requisite, therefore, is, that each should comprehend under it no inconsiderable number

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ber of individuals; and be as general as is compatible with its being natural; avoiding carefully the substitution of what should be esteemed only proper subdivisions of classes for classes themselves. That the whole subject of therapeutics may, by a view of this kind, be more completely considered, it is farther necessary, that the associations which are adopted, taken together, comprehend, as far as may be, the whole individuals with propriety referable to the *methodus medendi*:

THESE various conditions, it is apprehended, may be obtained, as far as the nature of the subject will admit of it, from adopting the following twenty-four classes. How far they will answer the conditions proposed, as being natural, general, and at the same time comprehending all the individuals, may be determined by considering the account hereafter to be given of each, and comparing the list of the most approved means of cure now employed with all the individuals taken together, which may be comprehended under the different classes.

THE

## LIST OF THE CLASSES.

1. Emetics.
2. Cathartics.
3. Diaphoretics.
4. Epispastics.
5. Diuretics.
6. Expectorants.
7. Errhines.
8. Sialagogues.
9. Blood-letting.
10. Emmenagogues.
11. Anthelmintics.
12. Lithontriptics.
13. Antacids.
14. Antalkalins.
15. Attenuants.
16. Inspissants.
17. Antiseptics.
18. Astringents.
19. Emollients.
20. Corrosives.
21. Demulcents.
22. Stimulants.
23. Sedatives.
24. Antispasmodics.

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AFTER adopting these general terms, it naturally follows, that some reasons should be assigned for rejecting the others. The particular causes of rejection may be sought for in one or other of the following general objections.

WHAT may be mentioned as the first, and applied perhaps as the most extensive cause of rejection, is, that many of these general terms are employed for expressing assemblages, where there is no proper foundation for any association amongst the different individuals meant to be comprehended. The individuals reduced under all the classes, indeed, have very generally been supposed to possess some common property. Frequently, however, this has been rested merely upon supposition : Supposition alone, however, it will readily be allowed, is no proper foundation for the formation of classes. When the effect, therefore, is not only single, but built upon such a footing as this, there can be no question as to the justice of rejecting the classes founded upon it. But the classes, founded upon supposed effects are not the only improper ones.

Classes

Classes built upon an effect, although established and certain, yet, if single, are equally liable to objection. A single effect may be produced in various, even in opposite ways: From a dependence upon this, therefore, medicines might come to be connected, which should in reality be disjoined. It cannot, therefore, be considered as a sufficient foundation for a proper natural association, all the articles reduced under which must answer to one common definition, and possess the same general mode of operation. Upon the plan, therefore, which has been proposed to be followed, wherever classes are founded upon single or supposititious effects, they may with propriety be rejected.

Another, and a very obvious cause of rejection, is, that many general terms, employed by different authors, are synonymous with others here adopted: Where this is the case, general terms, expressing unexceptionable associations, are often set aside, as being in fact already admitted. Examples, where this takes place, will occur from the most superficial view of the list here given. To point out any particular instances,

stances, therefore, would be altogether unnecessary.

BESIDES these reasons for rejection, many associations, in other respects sufficiently proper, have been set aside, as being too general; others, on the contrary, as being too limited: Of the former of these an example occurs in those medicines assembled under the general title of *Deobstruents*; and of the latter, under that of *Carminatives*.

HAVING thus in a general way pointed out the reasons for selecting the associations here adopted, in preference to the other general terms employed, it may perhaps be thought necessary to assign some reasons for arranging them in the order in which they are here placed; or, at least, it would naturally occur, as a question, Is this order the effect of chance, or intentional? Although, from the general plan formerly laid down of considering every association as separate and independent, it might be concluded, that the order in which they should be treated of, is a circumstance scarce claiming attention: It must, however,

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be allowed, that, although no general systematic method could, with propriety, be adopted; yet that, in some degree, the same advantages may be reaped from considering immediately, after each other, classes in their nature similar, as will result from subjoining, to each other, the consideration of individuals belonging to the same class. The reason, then, why one order of placing classes is preferable to another, is sufficiently obvious. The effects of medicines, as acting more directly upon the solids, fluids, or what may be called the animated system, are the general sources of combination; which, although not strictly or implicitly followed here, have chiefly regulated the formation of this list; those classes being placed first which are most common, or which most readily afford the *data* upon which the subsequent ones are to be explained, as far at least as that circle of causes which subsists in the animal machine will admit of it.





# E L E M E N T S

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## T H E R A P E U T I C S.

### PART SECOND.

#### OF PARTICULAR CLASSES OF MEDICINES.

NEMO unquam vitiis purus fuit, ego ne plurimis quidem. Non ideo, quod veritatem non amaverim, quaesiverim perpetuis, et in natura indaganda laboribus, et in scriptis utilium auctorum ; sed quod PROVIDENTIA divina, nullo certo ductu, vitam meam me siverit gubernare.

HALLER.



## PART SECOND.

### OF PARTICULAR CLASSES OF MEDICINES.

#### C H A P. I.

##### OF EMETICS.

###### § I. *Of the Nature of Emetics.*

###### I.

**B**Y emetic medicines are meant those substances, which, when taken internally, excite vomiting, provided they are capable of producing this effect in a sound state of the stomach, and independent of any action arising from their bulk, whilst, at the same time, they can be so managed as to operate without endangering the life of the patient.

###### II.

## II.

THE direct effects to be ascribed to emetics, are, that they excite sickness, nausea, and their common attendants. They produce the action of vomiting itself. They occasion sudden and opposite changes in the circulation. And they increase the secretion, or discharge of secreted matter, from the various glands evacuating their contents into the first passages.

## III.

THE changes arising in the system from the effects above-mentioned, are: Evacuation of the contents of the stomach: Free circulation through those glands whose secreted matters are acted upon: Agitation of the body in general: Commotion of the nervous system: And a particular affection of the surface of the body.

## IV.

THE individuals belonging to this class are numerous, and admit of considerable variety:  
There

There seems to be a foundation among other orders for establishing the following:

1. EMETICA IRRITANTIA. As examples of which may be mentioned, *Tartarum emeticum*, *Vitriolum album*, *Turpethum minerale*.

2. EMETICA NAUSEOSA. ——— *Ipecacuanha*, *Asarum*, *Scilla*.

3. EMETICA CALEFACIENTIA. ——— *Sinapi*, *Raphanus rusticus*.

4. EMETICA NARCOTICA. ——— *Nicotiana*, *Digitalis*.

## § 2. Of the Use of Emetics.

### V.

IN the application of emetics to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects as producing agitation of the body, in consequence of which they

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may

may be employed: To restore uniform circulation: To promote diminished lymphatic absorption: And to remove obstructions.

2. FROM their effects, as producing evacuation by vomiting, in consequence of which they may be used: To discharge noxious matters taken in by the mouth: To discharge morbid accumulations of secreted matters lodged in the stomach: And to evacuate ferous accumulations.

3. FROM their effects, as acting on the nervous system, in consequence of which they may be employed: To restore excitement to the nervous system in general: And to obviate inordinate affections of the nervous energy.

THESE indications may be illustrated and confirmed from considering the effects of emetics, as employed in cases of Fever, Dysentery, *Phthisis Pulmonalis*, Jaundice, Apoplexy, Dropsy, and Poisons.



## VI.

THE principal circumstances respecting the choice of orders in the class of emetics, may be deduced from the following observations concerning each.

1. EMETICA IRRITANTIA. The individuals referred to this order are, from their nature, adapted to all the sources of indication for which emetics may be employed.—From the degree of effect they produce, they are fitted for the most considerable changes; and are particularly preferable to other orders, where the greatest agitation and most complete evacuation is required.—The constitutions to which they are principally adapted, are the robust and strong, and such as, from a peculiarity of habit, are difficultly affected by other emetics.

2. EMETICA NAUSEOSA. From the nature of these emetics, they are, as well as the preceding, adapted to every source of indication.—From the degree of effect they produce, they are preferable where less considerable changes are wanted, and where it is more  
par-

particularly necessary to regulate the precise degree of change.—They may be adapted to any habit; but the constitutions in which they are particularly preferable to others, are the weak and infirm.

3. EMETICA CALEFACIENTIA. These emetics are not from their nature extensively applicable as belonging to this class. They are chiefly employed when it is intended an emetic effect should be combined with a topical stimulus to the stomach.—From the degree of effect they produce, they are fitted only for slight changes.—The constitutions to which they are principally adapted, are the delicate and debilitated.

4. EMETICA NARCOTICA. These, as having been but little employed, are still in a great measure unknown. They would seem applicable where a peculiar affection of the nervous system is wanted.—From the degree of effect they produce, they are fitted for the highest changes: But they can never with prudence be employed in such doses as to produce any considerable change.—They are ad-  
missible

missible only in those constitutions, where there is no high degree of irritability in the nervous system.

## VII.

THE cautions to be observed in the employment of emetics, as derived from their nature, are chiefly with regard to the agitation of the body which they occasion, and the increased celerity of the pulse attending their operation.—The conditions of the system which chiefly require attention in their employment, are, infancy, old age, pregnancy, delicate habits, and plethoric constitutions.—The circumstances chiefly to be regarded with respect to the regimen necessary for this class, are, the state of the stomach when the emetic is exhibited; the means of facilitating the operation; the time of exhibiting the medicine; and the temperature in which the patient is kept, after its operation is finished.

## VIII.

THE different individuals belonging to this class of medicines, are chiefly contra-indicated

ted in those cases where there occur a rupture or relaxation of containing membranes; topical inflammation of the internal viscera; a high degree of morbid debility in these; and fixed obstructions to the circulation.

C H A P.

## C H A P. II.

## OF CATHARTICS.

§ I. *Of the Nature of Cathartics.*

## IX.

**B**Y cathartic medicines are meant those substances, which, taken internally, increase the number of stools without endangering the life of the patient, provided they, at the same time, produce this effect independent of any action which may be attributed to the quantity of matter employed.

## X

THE more immediate affects arising from cathartics are: That they stimulate the alimentary canal. They increase the peristaltic motion of the intestines. They promote the secretion of those fluids which, for the purposes

poses of the oeconomy, are requisite in the intestinal canal. And they produce more frequent and looser stools.

## XI.

THE changes arising in the system from these effects of cathartics, are: The evacuation of the contents of the intestines: A diminution of the quantity of circulating fluids; and, in a particular manner, of the serosity: A change in the balance of circulation, with a diminution of perspiration: And higher excitement of the nervous energy in the system in general, but more especially in the intestinal canal.

## XII.

Among the individuals belonging to this class there seems to be a foundation for establishing the following orders:

1. CATHARTICA STIMULANTIA; as examples of which may be mentioned, *Falappa*, *Alqe*, *Colocynthis*.

2. CATHARTICA REFRIGERANTIA.—*Sal Glauberi*, *Sal Polychrestus*, *Gremor Tartari*.

3. CA-



3. CATHARTICA ADSTRINGENTIA.—*Rhabbarum, Rosa Damascena.*

4. CATHARTICA EMOLLIENTIA.—*Manna, Malva, Oleum Ricini.*

5. CATHARTICA NARCOTICA.—*Hyoscyamus, Digitalis.*

## § 2. *Of the Use of Cathartics.*

### XIII.

IN the application of cathartics to use, the indications deducible from their nature may be derived from the following sources :

1. FROM their effects as evacuants, in consequence of which they may be employed : To obviate morbid retention of the contents of the intestines : To diminish a plethoric state in the system; And to evacuate morbid accumulations of serum.

2. FROM their effects, as altering the balance of circulation, in consequence of which they

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may



may be employed: To promote free circulation through the intestines, in those cases where it is morbidly impeded: And to diminish the impetus of the blood against parts morbidly affected.

3. FROM their effects, as acting on the nervous system, in consequence of which they may be employed: To remove torpor in the muscular fibres of the intestines: And to restrain inordinate motions in these muscular fibres.

THESE indications may be illustrated and confirmed, from considering the effects of this class of medicines as employed in cases of Dysentery, Small Pox, obstructed Menstrues, and Diarrhœa.

#### XIV.

THE principal circumstances regulating the choice of orders in the class of cathartics, may be deduced from the following observations concerning each:

**CATHARTICA STIMULANTIA.** The individuals referred to this order, are, from their nature, adapted to fulfil indications reducible to every source: As evacuants, they are particularly fitted to discharge accumulations of mucus; and they may be used in obstinate cases, to obviate morbid retention of the contents of the intestines: As altering determination, they may be employed to promote free circulation through the intestines, where morbidly impeded: And, as affecting the nervous system, they may, with advantage, be used to remove torpor in the muscular fibres of the intestines.—From the degree of change they produce, they are preferable to others, where the highest purgative effects are wanted.—The constitutions to which they are chiefly adapted are, the indolent, the phlegmatic, and such as, from a peculiarity in habit, are difficultly affected by cathartics.

**CATHARTICA REFRIGERANTIA.** The individuals referred to this order, are, from their nature, more particularly adapted to the two first sources of indication. As evacuants, they are well adapted to diminish a plethoric state  
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in the system; and may, at least, be employed as a temporary remedy to obviate retention of the contents of the intestines. As changing determination, they are well fitted to diminish impulse against parts morbidly affected.—From the degree of effect they produce, they may be employed, where considerable changes are required; but, by regulating the dose, they may be suited to the slightest changes.—The constitutions to which they are particularly adapted, are the sanguine and plethoric.

*CATHARTICA EMOLLIENTIA.* The individuals referred to this order, are, from their nature, fitted to act as evacuants only, and their chief use, in this way, is to discharge the contents of the intestines.—From the degree of effect they produce, they are fitted only for inconsiderable changes.—The constitutions to which they are particularly adapted, are old people, and those habitually costive.

*CATHARTICA ADSTRINGENTIA.* The individuals referred to this order, are, from their nature, capable of answering many purposes

poses as cathartics ; but are seldom preferable to others, unless where it is necessary to conjoin an astringent with a purgative effect.—From the degree of effect they produce, they may be employed, where a very considerable change is wanted, while, at the same time, as being sufficiently manageable, they are capable of being adapted to slight changes.—The constitutions in which they are particularly proper are, the lax, the irritable, and those habitually liable to looseness.

CATHARTICA NARCOTICA. The individuals referred to this order, as having been but little employed, are still in a great measure unknown. From their nature, they would seem chiefly applicable for affecting the nervous system, and may perhaps be used with advantage for restraining inordinate motions of the intestines —From the degree of effect they produce, they are fitted for the highest changes.—The only constitutions in which they can be employed, are those which are able to endure a strong purgative operation.

## XV.

THE cautions to be observed in the employment of cathartics, as derived from their nature, are chiefly with regard to the degree of evacuation they produce, from the circulating fluids, and to the topical irritation they occasion to the intestines themselves.---The conditions of the system which chiefly require attention in their employment, are those of children, women, hysterical constitutions, high degrees both of irritability and torpor, remarkable delicacy of the stomach, and peculiar antipathies to the class, which are to be detected only by former use.---The circumstances chiefly to be regarded with respect to the regimen necessary for this class, are: The mode of exhibiting the cathartic: The time at which it is given: The temperature in which the patient is kept during its operation: The diet employed: And the degree of exercise he uses.

## XVI

The morbid conditions, contra-indicating the use of cathartic medicines, apply only to particular orders: Among other states, may  
be

be mentioned: A general inanition of the system, contra-indicating the use of the stimulant and refrigerant: A high degree of irritability in the intestines: And the circulation violently accelerated, likewise contra-indicating the stimulant: The circulation uncommonly slow and languid, contra-indicating the refrigerant: Habitual costiveness, contra-indicating the astringent: And uncommon relaxation of the intestines, contra-indicating the emollient.

## C H A P.



## C H A P. III.

## OF DIAPHORETICS.

§ 1. *Of the Nature of Diaphoretics.*

## XVII.

**B**Y diaphoretic medicines are meant those substances which, from being taken internally, promote a discharge by the skin, without producing this effect either in consequence of violent agitation or acute pain.

## XVIII.

THE direct effects produced by diaphoretic medicines, are : That they accelerate the motion of the blood : They produce free circulation through the vessels on the surface : And they excite a discharge of sweat.

## XIX.



## XIX.

THE changes taking place in the system, from the more immediate effects above-mentioned, are : A change in the balance of the circulation : A diminution of the quantity of circulating fluids : And a diminution more particularly of the serosity.

## XX.

AMONG the individuals belonging to this class of medicines, there seems to be a foundation for establishing the following orders.

1. DIAPHORETICA CALEFACIENTIA ; as examples of which may be mentioned, *Serpentaria*, *Contrayerva*, *Guaiacum*,

2. DIAPHORETICA PUNGENTIA. — *Spiritus*, *Cornu Cervi*, *Oleum essentielle Lavendulæ*.

3. DIAPHORETICA STIMULANTIA. — *Antimonium*, *Hydrargyrus*.

4. DIAPHORETICA ANTISPASMODICA. — *Opium*, *Moschus*, *Camphora*.

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5. DIAPHORETICA DILUENTIA——*Aqua,*  
*Serum lactis.*

§ 2. *Of the Use of Diaphoretics.*

XXI.

IN the application of diaphoretics to use, the indications deducible from their nature may be derived from the following sources.

1. FROM their effects, as changing the mode of circulation, in consequence of which they may be employed : To restore a proper flow of blood to the surface, in cases where it is morbidly diminished : To obviate morbid determination taking place to the internal viscera : To remove spasmodic affections on the surface of the body : To remove various causes obstructing or impeding the natural state of circulation on the surface : And to restore the natural discharge from the body, which should take place by the surface, in those cases where it is morbidly diminished.

2. AND,

2. AND from their effects, as producing evacuation, in consequence of which they may be employed: To diminish the quantity of circulating fluids, where it is greater than the state of the system at the time can admit of: To restore diminished lymphatic absorption: And to discharge morbid accumulations of serum.

THESE indications may be illustrated and confirmed, from considering the effects of diaphoretic medicines, as employed in cases of Fever, Dysentery, Rheumatism, Dropsy, and Herpes.

## XXII.

THE principal circumstances regulating the choice of orders in the class of diaphoretics, may be deduced from the following observations concerning each.

DIAPHORETICA CALEFACIENTIA. The individuals referred to this order are, from their nature, chiefly adapted for these indications to be fulfilled by diaphoretics from their action as evacuants; they are particularly

ly fitted to restore diminished lymphatic absorption, and to discharge morbid accumulations of serum: They are less applicable for these indications to be answered by diaphoretics, as changing the balance of circulation; but they may often, with propriety, be employed to restore a proper flow of blood to the surface when it is morbidly diminished.—From the degree of effect they are capable of producing, they may be employed in those cases where very considerable changes are requisite: By proper management they may likewise be adapted for slight changes.—The condition of the system, in which this order of diaphoretics is chiefly preferable to others, is, where the circulation is flow and languid.

DIAPHORETICA PUNGENTIA. The individuals referred to this order of diaphoretics are, from their nature, chiefly applicable for producing the same changes as were mentioned of the preceding order.—From the degree of effect they produce, they are chiefly preferable to other orders, where a considerable change is suddenly wanted.—The constitutions

tions to which they are principally adapted, are: The aged : Those in whose system there is little sensibility : Those who are difficultly affected by other diaphoretics : And those whose stomachs will not bear large doses of medicines.

DIAPHORETICA STIMULANTIA. The individuals referred to this order are, from their nature, more universally fitted for all the purposes to be answered by diaphoretics, than either of the preceding ones.—From the degree of effect they produce, they are chiefly applicable where the highest and most durable changes are wanted.—The constitutions to which they are chiefly fitted are the vigorous and strong.

DIAPHORETICA ANTISPASMODICA. The individuals referred to this order are, from their nature, chiefly fitted for these purposes, to be answered by diaphoretics, as changing the mode of circulation; but frequently they cannot, with advantage, be employed to restore the natural flow of blood to the surface, and can seldom be used to remove causes impeding the flow of blood through the vessels.

on the surface: Taken by themselves, they are but little adapted for fulfilling these indications, to be answered by diaphoretics, from their action as evacuants; but, when conjoined with others, they may frequently be employed with great advantage in this way.—From the degree of effect they produce; by themselves, they are fitted for slight changes only; in combination, for the highest changes.—The condition of the system in which this order of diaphoretics is chiefly preferable to others, is, when there exists a cause strongly propelling the blood to the surface, but, from a spasmodic affection there, no diaphoresis takes place.

**DIAPHORETICA DILUENTIA.** The individuals reduced to this order are, from their nature, but little adapted for changing the mode of circulation, and are by no means calculated for evacuation; they seem to be chiefly useful for promoting the effects of other diaphoretics.—From the degree of effect they are capable of producing, they can be employed only where inconsiderable changes are wanted.—The constitutions in  
which



which they are chiefly preferable to others, are, where a predisposition to diaphoresis is wanted, and those in which no diaphoresis takes place, although there are evident causes to induce it.

THE cautions to be observed in the employment of diaphoretic medicines, as derived from their nature, are chiefly with regard : To the determination they produce to the surface : To the acceleration of the motion of the blood, which many of them occasion : To the debility which, in consequence of the discharge, is produced in the system : And to the effects sometimes produced on the vessels of the surface themselves, by the free passage of the blood through them.—The conditions of the system which chiefly require attention in their employment, are : The period of infancy : Lax and debilitated habits : Constitutions liable to costiveness : And those not easily affected by diaphoretic medicines.—The circumstances chiefly to be attended to in the regimen necessary for this class, respect : The use of liquids : The temperature in which the patient is kept during the operation



tion of the medicine, and after it is finished : And various means of promoting the operation of the class, adapted to particular cases.

## XXIV.

THE different individuals belonging to this class of medicines are chiefly contra-indicated in those cases where there occurs : A morbid increase in the determination of blood to the surface : Uncommon relaxation of the system in general : A high degree of inanition : And a morbid diminution of the impulse of the blood on the basis of the brain,

C H A P.

## C H A P. IV.

## OF EPISPASTICS.

§ I. *Of the Nature of Epispastics.*

## XXV.

**B**Y epispastic medicines are meant those substances, which, when externally applied to the surface of the body, increase the action of the vessels in the part to which they are applied, in such a manner as to produce an afflux of humours there, occasioning manifest redness, or evacuation of a fluid different from the blood as it circulates in the vessels.

## XXVI.

THE direct effects to be ascribed to the individuals belonging to this class of medicines,

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are :

are: That they excite pain: They increase the quantity of fluids circulating through the part to which they are applied: They produce a discharge of liquid in the form of ferosity: Or they produce a discharge of pus,

## XXVII.

THE changes arising in the system from these effects of epispastics, are: Attention to the sensation of pain excited by the application of the epispastic: An increase of excitement in the nervous energy through the system in general: An uncommon determination of blood to the part particularly acted upon: A diminution of the quantity of blood passing through the blood-vessels in the neighbourhood of those in which the flow of blood is increased: A permanent change in the mode of circulation: A diminution of the quantity of circulating fluids: And, a particular diminution of the ferous part of the blood.

## XXVIII.

AMONG the individuals which may be referred

ferred to this class, there seems to be a foundation for establishing the following orders :

1. EPISPASTICA RUBEFACIENTIA: As examples of which may be mentioned, *Sinapi*, *Alkali Volatile*.

2. EPISPASTICA VESICANTIA.—*Cantharides*.

3. EPISPASTICA SUPPURANTIA.—*Fonticuli*, *Setacea*.

### § 2. *Of the Use of Epispastics.*

#### XXIX.

IN the application of epispastics to use, the indications deducible from their nature may be derived from the following sources :

1. From their effects as acting on the nervous energy, in consequence of which they may be employed : To diminish violent pain :

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To take off the effects of uncommon sensibility : And to remove torpor.

2. From their effects as altering the balance of circulation, in consequence of which they may be employed : To diminish the impetus of the blood against any part morbidly affected : And to diminish a morbid increase of action in vessels different from those to which they are applied.

3. From their effects as producing evacuation, in consequence of which they may be employed : To diminish the quantity of circulating fluids, when too great for the state of the system at the time : And to evacuate morbid accumulations of serum.

THESE indications may be illustrated and confirmed from considering the effects of this class of medicines, as employed in cases of Toothach, Hæmorrhagy, Apoplexy, Ophthalmia, Hepatitis, and Hydrocephalus.

## XXX.

THE principal circumstances regulating the choice of orders in the class of epispastics, may be deduced from the following observations concerning each.

EPISPASTICA RUBEFACIENTIA. The individuals referred to this order, from their nature, are not extensively fitted to answer the purposes for which the class may be employed. They are fitted to fulfill some indications from an action on the nervous system: On this account they may be employed for the removal of torpor: And they are, for this purpose, preferable to other epispastics where an effect is suddenly wanted. From the quickness of their effect, they may also sometimes be employed to fulfill indications as changing the mode of circulation.—From the degree of effect they produce, they are applicable chiefly to those cases where slight and transitory changes are wanted.—The constitutions to which they are principally adapted are dry, spare habits, and such as would be hurt by any degree of evacuation.

EPISPASTICA VESICANTIA. The individuals belonging to this order are, from their nature, adapted for all the indications to be answered by the class: They are particularly preferable to all others where evacuation is suddenly wanted.—From the degree of effect they produce, they may be employed where the highest changes are requisite: They will scarce admit of being adapted to those cases where slight changes only are proper.—The conditions of the system to which this order of epispastics are chiefly adapted, are ferous and phlegmatic habits, the prime of life, and acute diseases.

EPISPASTICA SUPPURANTIA. The individuals referred to this order are, from their nature, adapted to fulfill some of those indications which are to be answered by a change in the determination of the blood: On some occasions they may be of remarkable service for diminishing the impetus of the blood in particular parts, if a very considerable effect is not suddenly wanted. They may be used likewise for some purposes to be answered by evacuation: They are not adapted to diminish



nish the quantity of circulating fluids; but they may be of service for evacuating ferous accumulations; and are chiefly of use for this purpose, when these are deep seated, or in their nature such, that they cannot be easily acted upon.—The constitutions in which they are particularly serviceable, are those labouring under chronic complaints, and in the decline of life.

## XXXI.

THE cautions to be observed in the employment of epispastics, as derived from their nature, are chiefly with regard to the pain which is occasioned by their action, especially when that has no tendency to a removal of the complaints, and to the strangury which is a frequent attendant of their operation.—The conditions of the system which chiefly require attention in their employment, are female constitutions, and lax or phlegmatic habits.—The circumstances chiefly to be observed with regard to the regimen necessary during the class, respect: The accommodation of the diet and temperature to the disease of the patient: The length of the application of the  
vesi-

cantia: The treatment of the part after these are removed: And the continuance of epispastic applications in the suppurantia.

## XXXII.

THE different individuals belonging to this class of medicines, are chiefly contra-indicated in these cases where there occur: A high degree of irritability in the system in general: Morbid spissitude of the blood: Or a general inanition of the fluids.

C H A P.

C H A P. V.

## OF DIURETICS.

§ 1. *Of the Nature of Diuretics.*

XXVIII.

**B**Y diuretic medicines are meant those substances which, taken internally, occasion a discharge of urine in greater quantity, than occurs in the ordinary healthful state of the system; and which, at the same time, can be so managed as to produce this effect, without endangering the life of the patient.

## XXXIV.

THE direct effects to be ascribed to diuretics are : That they promote the secretion of  
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urine from the mass of circulating fluids: And they promote its excretion from the bladder.

## XXXV.

THE changes arising in the system from these direct effects are: A change in the balance of circulation: A diminution of the quantity of circulating fluids; but more especially of the serosity and of the saline parts of the blood: An increase of absorption by the lymphatic vessels: A diminution of the quantity of matter discharged by perspiration: And a more than ordinary flow of fluid through the urinary passages.

## XXXVI.

AMONG the individuals belonging to this class of medicines, there seems to be a foundation for establishing the following orders:

I. DIURETICA STIMULANTIA; as examples of which may be mentioned *Apium*, *Genista*, *Scilla*, *Colchicum*.

2. DI-

2. DIURETICA REFRIGERANTIA.———*Acetosa, Berberis, Acetum, Sal Diureticus.*

3. DIURETICA DILUENTIA.———*Aqua, Aquosa, Serum Lactis.*

§ 2. *Of the Use of Diuretics.*

XXXVII.

IN the application of diuretics to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects, as producing evacuation, in consequence of which they may be employed: To remove superabundant serosity from the blood: To evacuate morbid accumulations of serum: To remove morbid acrimony from the blood: And to diminish the quantity of circulating fluids, when too great for the state of the system at the time.

2. FROM their effects, as altering the mode of circulation, in consequence of which they may be employed: To restore the natural secretion

secretion of urine when morbidly diminished :  
And to diminish other secretions when mor-  
bidly augmented.

3. FROM their effects, as augmenting the  
flow of liquid through the urinary passages,  
in consequence of which they may be employ-  
ed : To remove obstructions in these pas-  
sages.

THESE indications may be illustrated and  
confirmed from considering the effects of this  
class of medicines, as employed in cases of  
Ascites, Icterus, and Nephritis.

### XXXVIII.

THE principal circumstances regulating the  
choice of orders in the class of diuretics, may  
be deduced from the following observations  
concerning each.

DIURETICA STIMULANTIA. The individuals  
referred to this order are, from their na-  
ture, adapted to some of those purposes to be  
answered by diuretics, from their action as  
evacuants : They are especially suited to  
remove



remove superabundant serosity from the blood: And are particularly fitted to evacuate serous accumulations: They are also fitted to produce changes in determination; but are seldom preferable to other orders for that purpose: They are but little adapted to answer any good purpose from increasing the flow of liquid through the urinary passages.—From the degree of effect they are capable of producing, they are preferable to the other orders in those cases where the highest changes are required.—The constitutions to which they are principally adapted, are those of old people, of lax phlegmatic habits, or wherein occurs a diminished sensibility.

DIURETICA REFRIGERANTIA. The individuals belonging to this order are fitted for the same purposes of evacuation as the preceding. They are more universally applicable to all the indications from this source, and are preferable to others in those cases where quickness of operation is wanted: They are well adapted, likewise, for the purposes of changing determination, and seem particularly preferable to other orders for diminishing



ing different morbid secretions.—From the degree of effect they are capable of producing, they may be adapted both to considerable and slight changes.—The constitutions in which they are chiefly preferable to others, are those of young people, those of remarkable sensibility, or those wherein occurs an accelerated pulse, and inflammatory diathesis.

**DIURETICA DILUENTIA.** The individuals belonging to this order are, from their nature, ill adapted to the general purposes of evacuation. They are often, however, of particular service in this way, as beginning or promoting the operation of other diuretics ; and are preferable to the other orders for the removal of acrimony from the blood. Altho' not fitted for producing any change in determination, they may often be employed with advantage to restore diminished secretion of urine ; and they are better fitted than the other orders for the removal of obstructions in the urinary passages.—From the degree of effect they are capable of producing, they are fitted only for inconsiderable changes.—The constitutions to which they are best adapted,

adapted, are those where the serosity appears to be deficient in the system.

### XXXIX.

THE cautions to be observed in the employment of diuretic medicines, as derived from their nature, are chiefly with regard : To the evacuation they occasion : And to the flow which is by their means induced through the urinary passages.—From the condition of the system attention is chiefly necessary to peculiarities in constitution which take place with regard to the class.—The circumstances chiefly to be regarded in the regimen necessary for this class are : The form of exhibition, and mode of promoting the operation of the medicine : The adapting these to the nature of the medicine employed, and that of the disease : The temperature of the body in general, and of the loins in particular : The diet : The temperature of liquids drunk : And the causes determining to the surface.

### XL.

THE different individuals belonging to this class of medicines are chiefly contra-indicated  
in

in those cases where there occurs : A high degree of morbid sensibility in the kidney : And fixed obstruction in the urinary passages. The use of the *Diuretica Stimulantia* and *Refrigerantia* are farther contra-indicated by a deficiency of serosity in the body ; and of the *Diluentia*, by a redundancy of serosity.

## CHAP.

## C H A P. VI.

## OF EXPECTORANTS.

§ I. *Of the Nature of Expectorants.*

## XLI.

**B**Y expectorant medicines are meant those substances which, taken internally, increase the discharge of mucus from the lungs, trachea, and fauces.

From the class of expectorants, as here defined, are excluded those demulcents which are frequently employed to facilitate the discharge of mucus, and are very generally referred to this class.

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## XLII.

## XLII.

THE direct effects to be ascribed to this class of medicines are : That they promote the discharge of mucus from the glands in the fauces : They stimulate the nerves in the stomach : And they increase the secretion by the mucus glands in the lungs and trachea.

## XLIII.

THE changes arising in the system from these effects are : An addition to the quantity of mucus to be excreted : An increase of sensibility in the lungs : And an uncommon propensity to discharge the mucus already secreted.

## XLIV.

AMONG the individuals belonging to this class, there seems to be a foundation for establishing the following orders :

EXPECTORANTIA INCIDENTIA ; as examples of which may be mentioned : *Scilla*, *Limonos*, *Ammoniacum*.

Ex-

EXPECTORANTIA STIMULANTIA.—*Hyssopus*,  
*Marrubium*, *Hedera terrestris*.

EXPECTORANTIA IRRITANTIA.—*Vapores a-*  
*quosæ*, *Vapores acidæ*.

§ 2. *Of the Use of Expectorants.*

XLV.

IN the application of expectorants to use, the indications deducible from their nature may be derived from the following sources :

1. FROM their effects as acting upon the secretion of mucus; in consequence of which they may be employed: To render the mucus thinner, where morbidly thick and viscid: And to augment its secretion, where preternaturally diminished.

2. FROM their effects, as acting on the sensibility of the lungs; in consequence of which they may be employed: To remove torpor in the lungs.

AND

3. AND from their effects, as acting upon the discharge of mucus; in consequence of which they may be employed: To compensate deficient irritation in the lungs: And to compensate deficient sensibility.

THESE indications may be illustrated and confirmed from considering the effects of this class of medicines as employed in cases of Catarrh and Peripneumony.

#### XLVI.

THE principal circumstances regulating the choice of orders in the class of expectorants, may be drawn from the following observations concerning each :

EXPECTORANTIA INCIDENTIA. The individuals belonging to this order, from their nature, are well adapted for all the purposes of expectorants.—From the degree of effect they produce, they are universally most powerful, whether as acting upon the secretion of mucus, as altering the sensibility of the lungs,



or as affecting the discharge of mucus.—The constitutions to which they are principally adapted, are the aged and phlegmatic.

**EXPECTORANTIA STIMULANTIA.** The individuals belonging to this order are, from their nature, fitted for the same purposes as the preceding—From the degree of effect they produce, they can be employed only where less considerable changes are wanted.—The constitutions to which they are chiefly adapted are: Those of young people; and of irritable habits.

**EXPECTORANTIA IRRITANTIA.** The individuals belonging to this order are, from their nature, but little adapted to act upon the secretion of mucus. They are sometimes, however, admissible to augment it, when preternaturally diminished. They are chiefly fitted to affect the discharge of mucus, and may, with advantage, be employed to compensate deficient irritation, or deficient sensibility in the lungs, especially where these effects are suddenly wanted.—From the degree  
of

of effect they are capable of producing, they can be employed for considerable, but for temporary changes only.—They may be used in any constitution, but are chiefly to be administered to adults.

## XLVII.

THE cautions to be observed in the employment of this class of medicines, as derived from their nature, are chiefly with regard: To the irritation they occasion on the fauces: To their action as stimuli in the stomach: And to the power they possess of irritating the lungs themselves.—The conditions of the system which chiefly require attention in their employment are: The degree of irritability in the lungs: And the age of the patient.—The circumstances chiefly to be attended to, in the regimen necessary for this class, respect: The employment of diet fitted to conspire with the effects of the medicine: The free use of exercise: And the atmosphere in which the patient breathes.

## XLVIII.

THE individuals belonging to this class of medicines are chiefly contra-indicated in those cases where there occur: A high degree of increased sensibility in the lungs: And an uncommonly quick excretion of mucus from the lungs.

CHAP.

## C H A P. VII.

## OF ERRHINES.

§ 1. *Of the Nature of Errhines.*

## XLIX.

**B**Y errhine medicines are meant those substances, which, when topically applied to the internal membrane of the nose, excite sneezing, and increase secretion, independent of any mechanical irritation.

## L.

THE direct effects to be ascribed to errhine medicines are : That they produce a sense of titillation in the nose : They occasion the action

tion of sneezing : They occasion the expulsion of secreted mucus from the different receptacles into which it is deposited : And they augment the secretion of mucus from the glands in the cavity of the nose serving that purpose.

## LI.

THE changes arising in the system, from these effects, are : Violent agitation of the body in general : Commotion of the nervous system : Sudden changes in the circulation : A diminution of the quantity of fluids in the body : More free circulation through the mucous glands, on which the sternutatory acts : And a change in the balance of circulation subsisting betwixt this and the neighbouring parts.

## LII.

In this class of medicines, the following orders may be established :

ERRHINA STERNUTATORIA; as examples of which may be mentioned, *Nicotiana*, *Helleborus*, *Euphorbium*.

ERRHINA EVACUANTIA. — *Asarum, Beta,  
ta, Betonica.*

§ 2. *Of the Use of Errhines.*

LIII.

IN the application of errhine medicines to use, the indications deducible from their nature may be derived from the following sources:

FROM their effects, as producing agitation in the system in general; in consequence of which they may be employed: To discharge morbid accumulations of mucus: To remove a state of torpor in the nervous system. And to obviate nervous affections of the convulsive or spasmodic kind.

AND from their effects, as producing determination to the nose; in consequence of which they may be employed: To promote the secretion of mucus in the nose where morbidly obstructed: And to occasion derivation from  
parts

parts morbidly affected in the neighbourhood of the nose.

THESE indications may be illustrated and confirmed, from considering the effects of this class of medicines as employed in cases of Apoplexy, Palsy, and Headach.

#### LIV.

THE principal circumstances regulating the choice of orders in the class of errhines, may be deduced from the following observations concerning each:

**ERRHINA STERNUTATORIA.** The individuals belonging to this order, from their nature, are best adapted for answering the general purposes of agitation.—From the degree of effect they produce, they are applicable in those cases where the greatest changes are wanted, and where these are required most suddenly.—The constitutions in which they are chiefly to be employed, are the vigorous and strong, provided, at the same time, they are not plethoric: When errhines are required, in cases where evacuation would be hurtful, this order only is to be employed.

ER-



ERRHINA EVACUANTIA. The individuals of this order from their nature, are preferable in those cases where an increase of determination is required to the nose — From the effect they produce, they are fitted only for inferior degrees of agitation; but are adapted to produce the most considerable evacuation — The constitutions of the body in which they are chiefly preferable, are the phlegmatic and infirm.

### LV.

THE cautions to be observed in the employment of errhines, as derived from their nature, are chiefly with regard: To the agitation they produce in the system in general: And to the change they occasion in determination, whether as producing a greater flow to the nose, or derivation from other parts.— The conditions of the system chiefly requiring attention in their employment are: Infancy: Old Age: Irritable and Hæmorrhagic habits: Those which are morbidly torpid: And those formerly accustomed to the frequent use of the same stimulus.— The circumstances to be attended to in the regimen necessary, respect;

respect: The means of obviating inflammation when excited: And the avoiding sudden exposure to cold air.

## LVI.

THE different individuals belonging to this class of medicines, are chiefly contra-indicated in those cases where there occur: A high degree of plethora: Morbid debility of the viscera: Uncommon sensibility of the nose: Preternatural determination to the nose: And ulceration of the nose, or of neighbouring parts.

## CHAP.

## C H A P. VIII.

## OF SIALAGOGUES.

§ 1. *Of the Nature of Sialagogues.*

## LVII.

**B**Y sialagogue medicines are meant those substances which excite an uncommon flow of saliva, provided they produce this effect without its arising from any disagreeable sensation which they may occasion.

## LVIII.

THE direct effects to be ascribed to this class of medicines are; That they stimulate the salivary glands, or their excretories, increasing the action of the secreting organ: They accelerate the circulation through the salivary glands, and through the blood vessels in the  
neigh-

neighbourhood of these: And they produce a praeternatural discharge of saliva, both in point of quantity and consistence.

## LIX.

THE changes arising in the system, from these more immediate effects, are: A change in the distribution of the fluids circulating through these vessels to which the action of the sialagogue extends, and through the vessels in the neighbourhood of these: A diminution of the quantity of circulating fluids in the system in general: And a change in the state of the remaining mass, independent of the diminution of quantity.

## LX.

IN the class of sialagogues, there seems to be a foundation for establishing the two following orders:

1. SIALAGOGA TOPICA; as examples of which may be mentioned *Nicotiana*, *Piper*, *Angelica*.

2. SIALAGOGA INTERNA.—*Hydrargyrus*.

§ 2. *The Use of Sialagogues.*

## LXI.

In the employment of sialagogues, the indications deducible from their nature may be derived from the following sources.

1. FROM their effects, as altering the balance of circulation ; in consequence of which they may be employed : To diminish an increased impetus of the blood, or even its ordinary impetus against parts in the neighbourhood of the salivary glands, when these happen to be morbidly affected : To diminish the action of the vessels when morbidly increased in such neighbouring parts: And to promote a free circulation of the blood through the salivary glands, in cases where it is morbidly obstructed.

2. And from their effects, as producing evacuation ; in consequence of which they may be employed : To evacuate morbid accumulations

tions of serum: And to produce a thorough change in the fluids of the body where morbidly vitiated.

THE principal circumstances respecting the choice of orders in the class of sialagogues, may be deduced from the following observations concerning each:

## LXII.

**SIALAGOGA TOPICA.** The individuals belonging to this order are, from their nature, well fitted for producing changes in determination. In some degree also, they are fitted for the purposes of evacuation: But, on this account, they are never, merely from their nature, preferable to the interna.—From the degree of effect they produce, they are fitted for the highest changes in determination: But for inconsiderable changes only in point of evacuation: They are, however, employed for the purposes to be answered by this means where evacuation is suddenly wanted, or where the continuance of it would be pernicious.—The conditions of the system, to which this order are chiefly adapted, in preference to the interna, are weak, delicate, and exhausted habits.



**SIALAGOGA INTERNA.** The individuals belonging to this order are chiefly adapted for the purposes of evacuation: They are likewise well fitted to promote free circulation through the salivary glands; but they cannot be employed to diminish the impetus of the blood against neighbouring parts.—From the degree of effect they produce, they are universally preferable, where the most considerable evacuation is wanted. They are likewise best fitted for the most permanent change of determination from distant parts.—The constitutions in which this order can with greatest safety be employed, are the strong and vigorous.

### LXIII.

THE cautions to be observed in the employment of sialagogues, as derived from their nature, are chiefly with regard: To the stimulus they occasion to the salivary glands and other neighbouring parts: To the time required by the order of interna for the production of evacuation: To the difficulty, perhaps, in some cases, to the impossibility of exciting salivation in this way: And to the debility



bility induced in the system from violent evacuation by the clafs.—The conditions of the system chiefly requiring attention in their employment, are: Old age: Constitutions habituated to sialagogues: Conditions of the body determining the mercury to act on other parts than the salivary glands: The menstrual discharge: And pregnancy.—The cautions to be derived from the regimen necessary for this class, apply chiefly to the interna, and principally respect: The preservation of moderate temperature: The use of low diet: The use of diluents: The use of emollient, sometimes of stimulant gargarisms: And the use of exercise.

#### LXIV.

SIALAGOGUES are chiefly contra-indicated in those cases where there occur: Uncommon determination to the salivary glands: Preternatural sensibility in them: Deficiency of serosity in the circulating fluids: A high degree of inanition: And general debility of the system.

## C H A P. IX.

## OF BLOOD-LETTING.

§ 1. *Of the Nature of Blood letting.*

## LXV.

UNDER this association of the *methodus medendi*, may be comprehended every artificial discharge of blood made with a view to the cure or prevention of disease.

## LXVI.

THE more immediate effects to be ascribed to the individuals comprehended under this association, are: That they remove part of the

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circulating fluids : They produce a temporary increase of the celerity of the pulse : They diminish the animal heat : And they change the mode of circulation.

### LXVII.

THE changes arising in the system from these direct effects, are: A change in the state of tension in the system, from a relaxation of the containing vessels : A diminution of the general impetus of blood through the whole system : A partial diminution of the impetus of the blood in particular parts, independent of the rest of the system : A diminution of the quantity of fluids separated by different secretory organs in the body : And an increase of nutrition from the ingesta.

### LXVIII.

IN this association of modes of cure, the two following orders may be established :

GENERAL BLOOD-LETTING ; as examples of which may be mentioned : *Venæsectio*, *Arteriotomia*.

TOPICAL BLOOD-LETTING.——*Scarificatio, Cucurbitulæ cruentæ, Hirudinum applicatio.*

§ 2. *Of the Use of Blood-letting.*

LXIX.

IN the employment of the individuals belonging to this association, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects, as diminishing the quantity of the blood; in consequence of which they may be employed: To remove plethora: And to take off morbid tension in the system:

2. FROM their effects, as changing the state of motion in the blood, in consequence of which they be employed: To lessen violent circulation: And to moderate morbid heat.

3. AND from their effects, as changing the course of the blood, in consequence of which they may be used: To diminish partial increased action in different blood-vessels: To  
lessen

lessen the impetus of the blood against parts, in which it produces or supports a morbid affection : And to diminish morbid secretions.

THESE indications may be illustrated and confirmed from considering the effects of blood-letting, as employed in cases of Angina, Pleurisy, Phthisis Pulmonalis, Rheumatism, and Fever.

## LXX.

THE principal circumstances regulating the choice of orders among the individuals belonging to this association, may be deduced from the following observations :

GENERAL BLEEDING.—The individuals belonging to this order are, from their nature, well adapted for those purposes which may be answered by a diminution of the quantity of blood ; and are alone employed for the removal of plethora, and of morbid tension when taking place over the whole system. They are likewise adapted for those purposes which may be answered by changing the state of motion in the blood : They are chiefly used  
to

to lessen violent circulation and remove obstructions: And are only employed to moderate morbid heat.—From the degree of effect they produce, they are preferable, where the most considerable and most sudden changes are required.—The constitutions to which they are principally adapted, are robust, vigorous, and plethoric habits.

**TOPICAL BLEEDING.**—The individuals referred to this order are, from their nature, best adapted for those purposes which may be answered by changing the mode of circulation: They have likewise some influence in changing the state of motion in the blood, and in diminishing its quantity.—From the degree of effect they are capable of producing, they may be used where the highest changes in determination are requisite: And are frequently preferable for producing inconsiderable evacuation.—The conditions of the system, in which this order are preferable, are debilitated, leucophlegmatic, or irritable habits, old age, and infancy.



## LXXI.

THE cautions to be observed in the employment of this class, as derived from its nature, are chiefly with regard: To the state of the pulse during the operation: To the quantity of blood discharged: To the appearance of the blood, particularly of a buffy-coat: And to the effects of the discharge as inducing deliquium.—The conditions of the system, which chiefly require attention in its employment are: Infancy: Old Age: Complaints during the prime of life exasperated by plethora: Urgent symptoms requiring bleeding where it is adverse to the nature of the disease: The time of critical discharges: Systems naturally torpid, highly irritable, or liable to deliquium.—The circumstances chiefly to be attended to in the regimen necessary respect: The diet and temperature, as regulated by the disease under which the patient labours: The time of performing the operation: The state of the ingesta at that time: And the mode of the discharge.



## LXXII.

THE morbid conditions which chiefly contra-indicate the use of this class of medicines, are: General inanition in the system: The circulation remarkably weak or languid: And a high degree of debility in the voluntary motions.

CHAP.

## C H A P. X.

## OF EMMENAGOGUES.

§ I. *Of the Nature of Emmenagogues.*

## LXXIII.

**B**Y emmenagogues are meant those medicines which possess a power of promoting that periodical discharge of blood by the uterus which, from the laws of the oeconomy, should take place in certain conditions of the female system.

## LXXIV.

**T**HE direct effects to be ascribed to this class of medicines are: That they stimulate the whole circulating system: They stimulate in a particular manner the vessels in the neighbourhood of the uterus; an effect which is probably, in some degree, communicated to the

the vessels of the uterus themselves: And they occasion a particular affection of the whole nervous system.

LXXV.

THE changes arising in the system from these direct effects are: An increase in the impetus of the blood circulating through the uterus and its neighbourhood: And an increase in the quantity of blood determined to the uterus. From some individuals there probably arises an increase of the tonic power of the vessels in the uterus; and, from others, a diminution of it.

LXXVI.

IN this class of medicines there seems to be a foundation for establishing the following orders:

EMMENAGOGA STIMULANTIA; as examples of which may be mentioned *Ferrum*, *Hydrargyrus*, *Antimonium*.

EMMENAGOGA IRRITANTIA.—*Aloe*, *Colocynthis*, *Sabina*.

EM-

EMMENAGOGA ANTISPASMODICA.—*Asafoetida, Ammoniacum, Castoreum.*

§ 2. *Of the Use of Emmenagogues.*

LXXVII.

IN the application of emmenagogues to use, the indications deducible from their nature may be derived from the following sources.

1. FROM their effects, as producing changes in the mode of circulation; in consequence of which they may be employed: To promote free circulation in the neighbourhood of the uterus: To promote that accumulation of blood in the vessels of the uterus themselves, which is necessary to the menstrual discharge: And to remove morbid obstructions to the passage of blood into the cavity of the uterus.

2. AND from their effects, as acting on the state of the animated solids; in consequence of which they may be used: To increase the tonic power of the system where it is morbidly diminished: And to remove morbid obstruction

tion

tion to the passage of blood into the cavity of the uterus.

AN illustration of these indications may be drawn from the employment of the individuals referred to this class in different cases of obstructed menses.

### LXXVIII.

THE principal circumstances regulating the choice of orders in the class of emmenagogues may be deduced from the following observations concerning each.

EMMENAGOGA IRRITANTIA. The individuals referred to this order are, from their nature, well adapted for those purposes, which may be answered by emmenagogues as affecting the mode of circulation: They are, however, but little fitted to remove obstructions to the passage of blood into the cavity of the uterus: They may often, with advantage, be employed to promote an accumulation of blood in the vessels of the uterus: And are almost alone to be used to promote free circulation in its neighbourhood: They are like-  
wise

wise in some degree fitted for these indications to be answered by an action on the animated solids: On some occasions they are of particular advantage to increase the tonic power in the vessels of the uterus.—From the degree of effect they are capable of producing, they may be used where very considerable changes are necessary.—The constitutions to which they are principally adapted, are the young, the plethoric, and the torpid.

EMMENAGOGA STIMULANTIA. The individuals referable to this order, are, from their nature, fitted for changing the mode of circulation; They are well adapted for promoting an accumulation in the vessels of the uterus, and to remove obstructions to the passage of blood into its cavity; but are seldom preferable to the irritantia, for promoting free circulation in the neighbouring vessels: They are well adapted to act upon the state of the animated solid, and are, for the most part, preferable for increasing the tonic power of the system in general.—From the degree of effect they are capable of producing, they may be employed for considerable, but gradual changes



changes only.—The constitutions in which this order are preferable to others, are lax, phlegmatic, and chlorotic habits.

EMMENAGOGA ANTISPASMODICA. The individuals reduced to this order are, from their nature, calculated to obviate a particular state in the uterus, and are fitted only for some of those changes to be obtained by an action on the animated solids. The chief purpose to which they are adapted, is the removal of a spasmodic stricture taking place on the vessels of the uterus.—With this intention they may be employed where the most considerable changes are requisite.—The constitutions to which they are more especially suited, are, the delicate, the weak, and the irritable.

### LXXIX.

THE cautions to be observed in the employment of emmenagogues, as derived from their nature, are chiefly with regard: To the consequences of a cure, if pushed too far: To the irritation occasioned to the intestines: And to the stimulus affecting the whole system.—The conditions of the system which  
chiefly



chiefly require attention in their employment are : The age of the patient : The complaints to which she has formerly been liable : The duration of her present complaints : And her general character.—The circumstances chiefly to be attended to in the regimen necessary, respect : The temperature in which the patient is kept : The use of moderate exercise : And the employment of liberal diet.

## LXXX.

IN enumerating the morbid conditions contra-indicating emmenagogues, a distinction is to be made betwixt those which contra-indicate the restoration of the discharge altogether, and those which contra-indicate particular modes of restoring it.

As morbid conditions, which entirely contra-indicate the restoration of this discharge, and, of course, the employment of the class with that intention, the following may be mentioned : A high degree of inanition : Various topical affections of the uterus ; such, for example, as ulcers, cancers, &c. And the particular periods of life during which, from the

laws of the system, this discharge should be stopt.

As morbid conditions contra-indicating particular modes of restoring it, may be mentioned : A topical inflammation, or particular irritable state of the rectum, contra indicating the irritant : And uncommon impetus of the circulation, or particular debility of other parts, contra-indicating the use of the stimulant.

CHAP.

## C H A P. XI.

## OF ANTHELMINTICS.

§ I. *Of the Nature of Anthelmintics.*

## LXXXI.

**B**Y anthelmintic medicines are meant those substances which, without endangering the life of the patient, are effectual in procuring the removal of worms lodged in the human body.

## LXXXII.

THE direct effects arising from this class of medicines are intended to be exerted only on the worms themselves; but there are, at the same time, few, if any medicines, which, when employed with this intention, do not  
also

also produce some effect on the animal body: To enter upon the consideration of these, however, would be foreign to this class. As anthelmintics, their effects are: That they kill worms to which they come to be applied in the body: And they expel them from the body.

## LXXXIII.

As it was above alledged, that the direct effects occasionally taking place in the human system from this class could not, with propriety, come under consideration here; so, the only changes which ought to be mentioned, are those which arise from the action of anthelmintics upon the worms, which are the removal of an almost infinite variety of different symptoms, which they occasion while lodged in the body.

## LXXXIV.

IN this class of medicines there seems to be a foundation for establishing the following orders:

ANTHEL-

ANTHELMINTICA MINERALIA; as examples of which may be mentioned, *Hydrargyrum*, *Stannum*, *Sulphur*.

ANTHELMINTICA OLEOSA.—*Oleum Olivæ*, *Oleum Lini*.

ANTHELMINTICA VEGETABILIA.—*Sabina*, *Tanacetum*, *Santonicum*.

ANTHELMINTICA CATHARTICA.—*Scammonium*, *Falappa*, *Aloe*.

## § 2. Of the Use of Anthelmintics.

### LXXXV.

THE individuals belonging to this class of medicines, as acting on the worms themselves, may be employed: To kill worms lodged in different parts of the human body: And to expel them from the body, whether dead or alive.

FROM the number of diseases which worms may produce, by acting as occasional causes,  
the

the extensive application of this class is sufficiently manifest; and the good effects to be reaped from the employment of anthelmintics may be illustrated from considering their use in cases of atrophica, diarrhoea, and vomitus.

### LXXXVI.

THE principal circumstances regulating the choice of orders in the class of anthelmintics, may be deduced from the following observations concerning each:

ANTHELMINTICA MINERALIA. The individuals belonging to this order, from their nature, are chiefly fitted to kill worms. Their power of producing this effect is not destroyed by the action of the *primæ viæ*. Hence they are often preferable when these insects are entirely out of the intestinal canal.—From the degree of effect they produce, they are fitted to answer this purpose in the most obstinate cases.—The constitutions to which they are principally adapted, are: Strong and robust habits: Those in the prime of life: And those with a degree of torpor in the alimentary canal.

AS-

ANTHELMINTICA OLEOSA. The individuals belonging to this order are, from their nature, also adapted to kill worms: They are, however, fitted only to produce this effect when these insects are lodged in parts of the body in which they can be immediately applied to them, without being greatly exposed to the action of the system.—From the degree of effect they produce in this way, they are fitted only for less obstinate cases.—The constitutions to which they are principally adapted are, reduced extenuated habits, and those in whom there occurs an abraded state of the alimentary canal, with uncommon sensibility.

ANTHELMINTICA VEGETABILIA. The individuals belonging to this order are likewise, from their nature, chiefly adapted to kill worms.—The degree of effect they produce in this way is even less considerable than that of the preceding. Hence they are fitted for cases where the slightest changes are requisite, and are often employed as a first remedy.—The constitutions to which this order are principally adapted are: Those of children:  
Those



Those of delicate habits; And those with a relaxed state of the intestinal canal.

ANTHELMINTICA CATHARTICA. The individuals belonging to this order are, from their nature, chiefly adapted to expell worms from the body: They may, however, in many cases, be also used to kill worms.—From the degree of effect they produce, they may be employed for the slightest, as well as most considerable changes in the expulsion of worms. As killing worms, though less powerful than the mineralia, yet they will often succeed in cases where the vegetabilia and oleosa have failed.—The constitutions in which they are chiefly useful are; Strong and robust habits: Those in the prime of life; and in whom the *primæ viæ* are loaded with fordes.

#### LXXXVII.

THE cautions to be observed in the employment of anthelmintics, as derived from their nature, are chiefly with regard: To the other effects they will have upon the system, independent of their action as anthelmintics.—The conditions of the system which  
chiefly

chiefly require attention in their employment, are the age, habit, and other diseases of the patient.—The circumstances chiefly to be attended to in the regimen necessary respect: The avoiding improper diet: And the right management of exercise.

## LXXXVIII.

THERE are, perhaps, no morbid conditions of the body, during which the cure of this disease may not, with propriety, be attempted by one means or other. But, although it may be doubtful, whether there are morbid conditions contra-indicating the whole class; yet, it cannot be questioned, that there are many contra-indicating particular orders. Among others may be mentioned: An abraded or inflamed state of the intestines, contra-indicating the mineralia: Accumulations of fordes in the *primæ viæ*, contra-indicating the oleosa: A peculiar sensibility of the stomach, contra-indicating the vegetabilia: And topical inflammation of the intestines, previous looseness, or a high degree of inanition, contra-indicating the cathartica.

## C H A P. XII.

## OF LITHONTRIPTICS.

§ 1. *Of the Nature of Lithontriptics.*

## LXXXIX.

**T**HIS class, from the strict sense and common acceptation of the word, should comprehend such medicines as possess a power of dissolving calculi in the urinary passages. It is, however, a question, whether there are in nature any such substances. By lithontriptics, as here adopted to express a class of medicines, are meant such substances as possess a power of removing a disposition in the body to the formation of calculi.

## XC.

THE direct effects arising from the individuals referred to this class of medicines, seem to be intirely exerted upon the stomach. By their action there: They condense the muscular fibres of the stomach: And they destroy acids contained in it:

## XCI.

THE changes arising in the system from these more immediate effects of this class are: An affection in some degree taking place in other parts of the body, analogous to that which is produced in the muscular fibres of the stomach: And a diminution of the quantity of acid in the saline matter collected by the kidney:

THAT it may be understood in what manner the medicines belonging to this class are, from their power of inducing these changes in the system, capable of answering the purposes expressed in the definition, it will be necessary to consider the nature of calculous diathesis.

## XCII.

## XCII.

AMONG the individuals belonging to this class, there seem to be a foundation for establishing the following orders :

LITHONTRIPTICA ANTACIDA; as examples of which may be mentioned, *Aqua Calcis*, *Alkali Causticum*.

LITHONTRIPTICA ADSTRINGENTIA:—*Uva Ursi*.

§ 2. *Of the Use of Lithontriptics.*

## XCIII.

THE individuals belonging to this class are, from their nature, confined to what may, strictly speaking, be reckoned one disease only; in counteracting which, the indications they are fitted to fulfill may be derived from the following sources :

1. FROM their effects, as altering the state of the solids in the body; in consequence of  
which

which they may be employed : To obviate a particular state of laxity in the stomach : And to obviate a particular morbid laxity in the kidney.

2. AND from their effects, as destroying acid ; in consequence of which they may be employed : To prevent a peculiar morbid state in the urine, arising from that of the parvulum furnished for secretion.

THESE indications are illustrated by the employment of lithontriptics in calculous complaints.

#### XCIV.

THE principal circumstances regulating the choice of orders in the class of lithontriptics may be deduced from the following observations concerning each :

LITHONTRIPTICA ANTACIDA. The individuals belonging to this order are, from their nature, particularly fitted for the destruction of acids—From the degree of effect they produce, they may be adapted to every change.—They are admissible in every constitution where it is requisite or proper to fulfill the indication.



LITHONTRIPTICA ADSTRINGENTIA. The individuals belonging to this order are, from their nature, particularly adapted for an action upon the state of the solids.—From the degree of effect they produce, little can be expected from them where very considerable changes are requisite.—The constitutions of the system to which they are principally adapted are; habits obviously lax: But they are often of particular service in others where there are no manifest marks indicating laxity.

#### XCV.

THE cautions to be observed in the employment of lithontriptics, as derived from their nature, are chiefly with regard: To the total destruction of acid in the stomach: To the effects of alkali on the stomach, when not defended by an acid: And to a corrugation of the stomach from the use of astringents.—The conditions of the system which chiefly require attention in their employment are: The prevailing acidity in the stomachs of children: Various morbid affections of the stomach: And the disposition to vomiting, which is so frequently a concomitant  
of



of calculous complaints.—The cautions to be derived from the regimen necessary, principally respect the avoiding relaxing or acescent diet.

## XCVI.

THERE is, perhaps, no case in which the use of this class is intirely contra-indicated. As morbid states contra-indicating particular orders may be mentioned: A tendency to alkalescency in the stomach, contra-indicating the antacida: And a praeternatural corrugation of the stomach, contra-indicating the adstringentia.

C H A P.

## C H A P. XIII.

## OF ANTACIDS.

§ I. *Of the Nature of Antacids.*

## XCVII.

**B**Y antacid medicines are meant those substances which possess a power of destroying acid, while they may, at the same time without danger, be taken internally into the human body.

## XCVIII.

THE more immediate effects of the antacid medicines, or at least the effects exerted by the substances belonging to this class when they act as antacids, are not exerted upon the human body, but upon the acid to which they  
come

come to be applied: Their action upon the stomach or other parts of the *primae viae*, in which acid may happen to be lodged, is to be considered as merely accidental; and the only effect to be ascribed to these substances, as belonging to this class, is, that they neutralize these acids to which they come to be applied in the *primae viae*.

## XCIX.

FROM what has been said with regard to the direct effects arising from medicines belonging to this class, it would be needless to observe, that the only changes here to be considered, are those which they produce, as destroying acid. As destroying superabundant acid, they act against a morbid state; what is therefore to be said with regard to this, will more properly be referred to the indications of cure. As destroying acid not superabundant, the change they produce has a pernicious effect; for, although antiseptic themselves, they have a putrid tendency, the acid in the body being the antiseptic provided by nature.

IN the class of antacid medicines, there seems to be a foundation for establishing the following orders :

ANTACIDA ECCOPROTICA ; as examples of which may be mentioned *Magnesia alba*, *Tartarum solubile*, *Sapo*.

ANTACIDA RESTRINGENTIA. ————— *Creta*,  
*Oculi Cancrorum*, *Testae Ostreorum*.

## § 2. Of the Use of Antacids.

### CI.

IN the application of antacid medicines to use, the only indication deducible from their nature, is derived from their power of destroying acid ; in consequence of which they may be employed : To correct morbid acidity in the *primae viae*.

THIS indication may be illustrated from considering the effect of antacids, as employed in cases of Cardialgia, Dyspepsia, and Hypochondriasis.

### CII.

## CII.

THE choice betwixt the different orders of this class is chiefly to be determined by the state of the belly; as far as depends upon their nature, then, the cases to which each is applicable are sufficiently manifest.—From the degree of effect they produce, both orders may be employed where very considerable changes are requisite.—The constitution of the patient has seldom any influence in determining the choice, farther than is connected with the state of the belly, as both orders are readily admissible in any habit.

## CIII.

THE cautions to be observed in the employment of antacids, as derived from their nature, are chiefly with regard: To the effects of a total destruction of acid in the *primae viae*.—The conditions of the system from which cautions are chiefly suggested in their employment are: Infancy: And Old Age; especially, when, at this last period of life, the acidity is accompanied with costiveness.—In the  
neces-

neceffary regimen, the cautions chiefly to be attended to refpect: Regularity in diet: And the proper application of exercife.

#### CIV.

THE only morbid condition during which a cure of this difeafe would be improper, and which can therefore be mentioned as contra-indicating the clafs, is a tendency to putridity in the humours of the body.

CHAP.

## C H A P. XIV.

## OF ANTALKALINES.

§ 1. *Of the Nature of Antalkalines.*

## CV.

THE class of antalkalines may be considered as in a great measure the converse of the class last mentioned. By the individuals, comprehended under this association, are meant those substances which possess a power of neutralizing alkalines, and which can be so regulated as to be taken internally without danger.

## CVI.

THE same observation may be made concerning the direct effects of this class as was of the last; That, acting as antalkalines, their only effects



effects are those they exert upon the alkali itself: In enumerating, therefore, the direct effect to be ascribed to the medicines belonging to this class, the only thing to be taken notice of is, that they neutralize those alkaline substances to which they come to be applied in the *primae viae*.

## CVII.

WITH regard to the changes in the system arising from antalkalines, it is evident, as was formerly observed in the case of antacids, that the only effects which can be ascribed to this class are those they produce as destroying superabundant alkali, which, as depending on the removal of a morbid affection, will, with greater propriety, be considered under the use of the class.

## CVIII.

IN the class of antalkalines, the following orders may be established :

ANTALKALINA VEGETABILIA; as examples of which may be mentioned: *Acetosa*, *Berberis*, *Tamarindus*.

ANT-

ANTALKALINA SALINA.—*Acidum Vitriolicum, Nitrosum, Muriaticum, Vegetabile.*

§ 2. *Of the Use of Antalkalines.*

CIX.

IN the application of antalkalines to use, the only indication suggested by their nature arises from their power of neutralizing alkali; in consequence of which they may be employed to correct alkalescency in the *primæ viæ*.

THE power of antalkalines, as answering this indication, may be illustrated and confirmed from considering their use in scurvy, and various putrid disorders.

CX.

THE principal circumstances regulating the choice of orders in the class of antalkalines, may be deduced from the following observations

tions concerning each. It may, however, be not improper to observe, that, as the individuals are, from their nature, fitted for the same changes, the circumstances pointing out the preference of one order to another must be sought for from other sources.

**ANTALKALINA VEGETABILIA.** The individuals belonging to this order, from the degree of effect they produce, are preferable in those cases where an inconsiderable change only is wanted.—From the condition of the patient, they are chiefly applicable to young people, and to those whose stomachs are particularly delicate.

**ANTALKALINA SALINA.** The individuals belonging to this order, from the degree of effect they produce, are preferable where the highest changes are requisite.—From the condition of the patient, they are chiefly applicable to people in the prime of life, or farther advanced in years; And to those whose stomachs are not apt to be affected from slight causes.

## CXI.

THE cautions to be observed in the employment of antalkalines, as derived from their nature, are chiefly with regard : To their properties as stimulants, after having fully saturated the alkalescency : And to the sedative effects which they afterwards universally exert in the system.—The conditions of the system which chiefly require attention in their employment, are : Childhood : A high degree of sensibility in the stomach : Habits in which their former employment has been observed to be attended with any peculiar effects : And those affected with bilious complaints, especially if they have been contracted, or exist in warm climates.—The circumstances chiefly to be attended to in the regimen necessary, respect : The avoiding, or the proper regulation of alkalescent diet.

## CXII.

THE different individuals belonging to this class of medicines are chiefly contra-indicated

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in

in those cases where there occur : A constitutional disposition to cardialgia, on the use of acids : Circulation uncommonly slow or languid : And a remarkable diminution of animal heat.

## CHAP.

C H A P. XV.

O F A T T E N U A N T S.

§ 1. *Of the Nature of Attenuants.*

CXIII.

**B**Y attenuant medicines are meant those substances which, from being used internally, possess a power of giving the human blood a consistence more thin and fluid than it had previous to their use.

CXIV.

THE more immediate effects to be ascribed to attenuants are: That they dilute the contents of the *primæ viæ*: They add an uncommon proportion of serosity to the blood: They increase the solvent power of the serosity:  
And

And they render the consistence of the general mass of blood more liquid than it was previous to their use.

### CXV.

THE changes taking place in the system from the direct effects of attenuants are : Free circulation through the minute blood-vessels : An increase of various secretions, especially of the ferous ones : And an increase of transudation into the various cavities of the body.

### CXVI.

IN the class of attenuants there seems to be a foundation for establishing the following orders :

ATTENUANTIA DILUENTIA ; as examples of which may be mentioned, *Aqua, Aquosa, Serum Lactis.*

ATTENUANTIA SOLVENTIA.— *Sales Nutri, Sapo.*



§ 2. *Of the Use of Attenuants.*

## CXVII.

IN the application of attenuant medicines to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects as altering the state of the blood itself; in consequence of which they may be employed: To remove morbid viscosity in the blood: And to restore free circulation when morbidly obstructed in the small vessels.

2. AND from their effects, as acting upon the secretions; in consequence of which they may be employed: To increase the quantity of serous evacuations, where morbidly diminished: And to render these serous evacuations more fluid where they are morbidly thick and viscid.

THESE indications may be illustrated and confirmed from considering the effects of this  
class

class of medicines as applied to use in cases of rheumatism and ischuria.

### CXVIII.

THE principal circumstances regulating the choice of orders in the class of attenuants may be deduced from the following observations concerning each:

**ATTENUANTIA DILUENTIA.** The individuals belonging to this order, are, from their nature, well adapted for fulfilling all the indications to be answered by the class.—From the degree of effect they produce, they are fitted for those cases where the most considerable changes are necessary: They are often also preferable where sudden changes are requisite.—The constitutions to which they are principally adapted, are young people, and those of plethoric habits.

**ATTENUANTIA SOLVENTIA.** The individuals belonging to this order, as well as the former, are likewise adapted to all the indications pointed out: But they are more especially fitted for those which may be answered  
by

by an alteration being produced on the blood.—From the degree of effect they are capable of producing, they are preferable only where inconsiderable changes are required: They are best adapted for those cases where flow and permanent changes are wanted.—The constitutions to which they are more especially suited, are old and phlegmatic habits.

## CXIX.

THE cautions to be observed in the employment of attenuants, as derived from their nature, are chiefly with regard: To the relaxation which they produce in the stomach: To the nausea which they frequently occasion: And to the secretions which they particularly affect.—From the condition of the patient, the circumstances to which attention is chiefly requisite, are: The former complaints with which the patient may have been affected: The present state of the various secretions: And the state of the circulation.—The circumstances chiefly to be attended to in the regimen necessary, respect: The avoiding exercise, particularly to any degree of violence:  
The

The avoiding, in diet, substances affording a great quantity of mucilage: And the temperature in which the patient is kept.

## CXX.

THE only morbid condition of the body to be mentioned as contra-indicating this class of medicines, is, where there occurs: A preternatural tenuity of the general mass of fluids.

## CHAP.

## C H A P. XVI.

## OF INSPISSANTS.

§ I. *Of the Nature of Inspissants.*

## CXXI.

**B**Y inspissant medicines are meant those substances which, from internal use, have a power of giving the human blood, while it circulates in the system, a consistence more thick and viscid than it had previous to their exhibition.

## CXXII.

THE direct effects to be ascribed to inspissants are: That they occasion a more copious supply of chyle: They render the chyle less serous than in the ordinary state of nature:

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They

They introduce into the blood a matter capable of blunting saline acrimony: And they give the blood 'itself' a more thick and viscid consistence.

## CXXIII.

THE changes arising in the system from these direct effects are: A less speedy transmission of blood through the blood-vessels, especially through the smaller ones: A diminution of the various serous secretions: And a diminution of the quantity of serosity transuding into the different cavities of the body.

## CXXIV.

AMONG the individuals belonging to this class, there seems to be a foundation for establishing the following orders:

INSPISSANTIA NUTRIENTIA; as examples of which may be mentioned, *Hordeum*, *Secale*, *Oryza*, *Triticum*.

INSPISSANTIA DEMULCENTIA.—*Glycyrrhiza*, *Gummi Arabicum*, *Ichthyocolla*.



§ 2. *Of the Use of Inspissants.*

## CXXV.

IN the application of inspissants to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects as altering the state of the blood itself; in consequence of which they may be employed: To remove morbid tenuity in the blood: And to prevent the transmission of red blood through vessels not naturally fitted to receive it.

2. AND from their effects, as acting on the secretions; in consequence of which they may be employed: To diminish the quantity of ferous secretions, where morbidly increased; And to render them more viscid, where morbidly thin and fluid.

THESE indications may be illustrated and confirmed from considering the effects of this class of medicines as employed in cases of Hemorrhagy, and Diarrhœa.

## CXXVI.



## CXXVI.

THE principal circumstances regulating the choice of orders in the class of inspissants may be deduced from the following observations concerning each :

INSPISSANTIA NUTRIENTIA. The individuals referred to this order are, from their nature, equally adapted to both sources of indication ; while, at the same time, they do not seem to be so particularly fitted to any one, that from thence any cause of preference can be deduced.—From the degree of effect they produce, they are, upon their first application, fitted for inconsiderable changes only ; but where changes are not immediately required, they may be fitted to produce the most gradual and highest that are requisite.—The constitutions to which they are principally adapted, in preference to the order next to be mentioned, are those of patients whose digestive faculties are very weak.

INSPISSANTIA DEMULCENTIA. The individuals belonging to this order are likewise, from their nature, adapted to both sources of indi-

indication.—From the degree of effect they produce, they are preferable in those cases where the highest and most sudden changes are wanted.—The constitutions to which they are principally adapted, are those where the appetite is keen, and the digestion quick.

## CXXVII.

THE cautions to be observed in the employment of inspissants, as derived from their nature, are chiefly with regard: To their action on the stomach and intestines: To the state of the belly which they produce: To their effects upon the circulation in general: And to the state of the various secretions during their employment.—The conditions of the system which chiefly require attention in their employment are: A peculiar delicacy of the stomach: And a constitutional disposition to flatulency or acidity.—The circumstances chiefly to be attended to in the regimen necessary for this class, respect: The diet of the patient, which may always be so managed as to promote the operation of the medicine: And the proper application of exercise, both as conspiring to  
the

the cure, and assisting the operation of the medicine.

### CXXVIII.

THE different individuals belonging to this class of medicines are chiefly contra-indicated in those cases where there occur: A high degree of debility in the digestive organs: Morbid viscosity of the blood: Or a preternatural diminution of secretions.

### CHAP.

C H A P. XVII.

OF ANTISEPTICS.

§ 1. *Of the Nature of Antiseptics.*

CXXIX.

**B**Y antiseptic medicines are meant those substances which possess a power of preventing animal matters from passing into a state of putrefaction, and of obviating putrefaction when already begun.

CXXX.

BEFORE attempting to enumerate the direct effects arising from antiseptics, it will be necessary to observe, that an antiseptic effect only takes place, or, at least, is only obvious, in

in those cases where a state of putrefaction, or an evident tendency to it, exists.

THE direct effects arising from this class of medicines are, in some degree, varied from the method of their application. The principal cause of this variety is, their being used externally or internally; but, in considering their effects as antiseptics, they will not only be most obvious, but will admit of the best illustration from the inquiry being confined to the former.

ANTISEPTICS, upon being externally applied to living animal matters in a state of putrefaction, change the appearance of those matters from a livid or bluish cast, to a more florid red: They render the texture of the part more firm and compact: They alter the matter discharged to a more thick consistence and whiter colour: And they remove a strong foetid smell, arising from the part before their use. A combination of all these effects is expressed in the general property by which they are defined.

## CXXXI.

As the direct effects of this class of medicines are those exerted in producing an antiseptic quality; so the changes in the system to be ascribed to them, are those arising from this antiseptic power, when produced, which, as being entirely referable to a morbid state, will, with greater propriety, fall under the illustration of the indications of cure which they may be employed to fulfill.

## CXXXII.

AMONG the individuals belonging to this class of medicines, there seems to be a foundation for establishing the following orders:

ANTISEPTICA AMARA; as examples of which may be mentioned, *Cortex Peruvianus*, *Absinthium Chamæmelum*.

ANTISEPTICA REFRIGERANTIA.—*Sales acidi*, *Sales neutri*.



ANTISEPTICA STIMULANTIA.—*Vinum, Alcohol, Oleum Terebinthinæ.*

ANTISEPTICA ANTISPASMODICA.—*Camphora, Asa fœtida.*

## § 2. *Of the Use of Antiseptics.*

### CXXXIII.

IN the application of antiseptics to use, the indications deducible from their nature are entirely to be derived from their antiseptic property; in consequence of which they may be employed: To supply the antiseptic power in the human body, where it is morbidly deficient: To obviate the assimilating quality of any putrid ferment introduced into the body: To correct a putrid diathesis in the humours: To prevent the further progress of morbid putrefaction taking place in the solids: And to restore to a sound state solids morbidly putrid.

THESE indications may be illustrated and  
con-



confirmed from considering the effects of this class of medicines, as employed in cases of Scurvy, Putrid Fever, and Gangrene.

## CXXXIV.

THE principal circumstances regulating the choice of orders in the class of antileptics may be deduced from the following observations concerning each:

ANTISEPTICA AMARA. The individuals referred to this order are, from their nature, adapted to all the purposes of the class; and are preferable to the others, where it is necessary to combine with the antiseptic power an astringent effect: They are in general best adapted for external use, and equally with the others for internal.—From the degree of effect they produce, they are fitted for those cases where the most considerable and most sudden changes are necessary.—They are well fitted to every condition of body, while, at the same time, there does not appear to be any particular one from which they claim a preference.

AN-

ANTISEPTICA REFRIGERANTIA. The individuals referred to this order are, from their nature, chiefly preferable in those cases where marks of a putrescent state appear, with violent inflammatory symptoms.—From the degree of effect they are capable of producing, they can be employed only where inconsiderable changes are requisite.—The constitutions to which they are principally adapted are: The Young: Vigorous: And Plethoric.

ANTISEPTICA STIMULANTIA. The individuals referred to this order are, from their nature, chiefly applicable in those cases where it is necessary to combine a general stimulus to the system with an antiseptic property: They are best fitted for cases where prevention only is required.—From the degree of effect they are capable of producing, they can be employed only where slighter changes are necessary; but are preferable where these are most suddenly required.—The constitutions to which they are chiefly adapted are: The Old: The Debilitated: And those with sluggish or languid circulation.

ANTISEPTICA ANTISPASMODICA. The individuals belonging to this order are, from their nature, chiefly adapted to those cases where it is necessary to conjoin antiseptic with antispasmodic powers.—From the degree of effect they are capable of producing, they are fitted for those cases where the most considerable and most sudden changes are requisite.—The constitutions to which they are principally adapted are irritable habits.

#### CXXXV.

THE cautions to be observed in the employment of antiseptics, as derived from their nature, apply chiefly, not to the whole class, but to particular orders, and, as such, will, with greater propriety, fall to be considered elsewhere. With regard to the whole class, attention is chiefly necessary to the celerity with which the effects are produced.—The conditions of the system which principally require attention in their employment are: Old Age; Pregnancy: And the time of the Menstrual Discharge.—The circumstances particularly to be attended to in the regimen necessary, respect:

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The application of free and of cool air: The avoiding alcalescent diet: And use of exercise.

## CXXXVI.

THE different individuals belonging to this class of medicines do not seem to be all contra-indicated by any morbid condition. The internal use of the amara are chiefly contra-indicated by a peculiar sensibility of the stomach: And of the refrigerantia, by a debility of the vital powers: What apply to the antispasmodica and stimulantia will be better considered under these classes.

C H A P.

## C H A P. XVIII.

## OF ASTRINGENTS.

§ 1. *Of the Nature of Astringents.*

## CXXXVII.

**B**Y astringent medicines are meant those substances which possess a power of condensing the animal fibre, without producing this effect in consequence of any mechanical action.

## CXXXVIII.

THE direct effects arising from astringent medicines are: That they excite a peculiar sensation referred to the part to which they are applied; if to the organs of taste, a sense  
of

of dryness: They produce a remarkable corrugation in the parts on which they more immediately act: And they occasion, in some degree, a similar affection through the rest of the system. Some individuals belonging to this class, produce an evident condensation in dead animal fibres.

## CXXXIX.

THE changes arising in the system from these direct effects are: An increase of the power of cohesion in various parts of the animal body: An increase of what may be termed the tonic power in the system: A diminution of the capacity of containing vessels in the system: A diminution of irritability, and perhaps, in some degree, of sensibility.

## CXL.

AMONG the individuals belonging to the class of astringents, there seems to be a foundation for establishing the following orders.

ASTRINGENTIA STYPTICA; as examples



ples of which, may be mentioned *Alumen, Cuprum, Ferrum.*

2. ADSTRINGENTIA CORRUGANTIA.—  
*Rosa, Quercus, Gallae.*

3. ADSTRINGENTIA INDURANTIA.—*Alcohol, Acida.*

4. ADSTRINGENTIA TONICA.—*Exercitium, Frigus, Frictio.*

§ 2. *Of the Use of Astringents.*

CXLI.

IN the application of astringents to use, the indications deducible from their nature may be derived from the following sources.

1. FROM their effects as acting on the simple fibre; in consequence of which they may be employed: To restore the natural degree of compactness to parts morbidly relaxed:

G g

2. FROM



2. FROM their effects as acting on the living fibre ; in consequence of which they may be employed : To obviate original delicacy : To restore diminished tonic power : To diminish morbid irritability : And to produce a constriction on the orifices of ruptured vessels.

THESE indications may be illustrated and confirmed, from considering the effects of astringents, as employed in cases of Haemorrhagy, Dyspepsia, and Hysteria.

#### CXLII.

THE principal circumstances regulating the choice of orders in the class of astringents, may be deduced from the following observations concerning each.

ADSTRINGENTIA STYPTICA.—The individuals belonging to this order, from their nature, are well adapted for those purposes to be answered by an action on the simple solid, and may be employed to restore the proper tone to parts morbidly relaxed. They are likewise well fitted for acting on the living fibre ;

fibre; and are, in most cases, preferable to ~~others~~, for producing a constriction of the orifices of ruptured vessels.—From the degree of effect they produce, they may be employed where the highest and most sudden changes are wanted.—The constitutions to which they are particularly adapted where complaints are the most urgent.

**ADSTRINGENTIA CORRUGANTIA.** The individuals belonging to this order are, from their nature, as well as the former, adapted to both sources of indication. They are chiefly used to restore diminished tonic power, and to diminish morbid irritability.—From the degree of effect they are capable of producing, they are fitted for cases where considerable and permanent changes are necessary: They may also, however, be adapted to those cases where slight changes only are wanted.—The constitutions to which they are particularly fitted, are the irritable and delicate.

**ADSTRINGENTIA INDURANTIA.** The individuals

viduals belonging to this order are, from their nature, fitted only to act upon the living animal fibre. They are chiefly employed for external purposes; and, in this way, are frequently used to produce a constriction of the orifices of ruptured vessels.—From the degree of effect they are capable of producing, they are chiefly applicable in those cases where slight, sudden, or transitory changes are required.—For external purposes, they are applicable to all constitutions; nor from this source can any cause of preference with regard to them be deduced.

ADSTRINGENTIA TONICA. The individuals belonging to this order are, from their nature, calculated for those indications to be answered by an action on the living solids. They may be employed, with advantage, to diminish morbid irritability; and are, in most cases, preferable to obviate original delicacy, and to restore diminished tonic power.—From the degree of effect they produce, they are fitted for those cases in which the highest,

est, the most permanent, and the most gradual changes are requisite.—The constitutions in which they are chiefly preferable to others, are those of young people, and those of sanguine temperaments.

### CXLIII.

THE cautions to be observed in the employment of astringents, as derived from their nature, are chiefly with regard to the stimulant and caustic powers possessed by many individuals belonging to the class: To the effects of a cure, if carried beyond the natural state: And especially, to the diminution of sensibility and irritability.—The conditions of the system which chiefly require attention in their employment are, old age, melancholic habits, and particular morbid affections in the stomach.—The circumstances chiefly to be attended to in the regimen necessary, respect: The avoiding a relaxing diet: And the temperature and air in which the patient is kept.

### CXLIV.

## CXLIV.

THE different individuals belonging to this class of medicines are chiefly contra-indicated in those cases where there occur : A high degree of rigidity in the system in general : And remarkable insensibility in the moving fibres.

C H A P.

## C H A P. XIX.

## OF EMOLLIENTS.

§ I. *Of the Nature of Emollients.*

## CXLV.

**B**Y emollient medicines are meant those substances which possess a power of rendering the animal fibre more soft and flexible, without producing that effect from any mechanical force exerted upon the fibre itself, or from any action of the fibre.

As this class is in a great measure the opposite of the preceeding, from what has been said of the one, the other may in some degree be understood.

## CXLVI.

## CXLVI.

THE direct effects to be ascribed to emollients are : That they relax the part to which they are applied : They excite a peculiar sensation indistinctly referred to the part to which they are applied : And they produce, in some degree, the same effect, through the rest of the system, as in the part on which they more immediately act.

## CXLVII.

THE changes arising in the system from their more direct effects are : A diminution of the power of cohesion in various parts of the animal body : A diminution of tonic power in the system : An increase of the capacity of containing vessels in the part on which they more particularly act, and in some degree in the system in general : And an increase of irritability and sensibility through the system.

## CXLVIII.

AMONG the individuals belonging to this class of medicines, there seems to be a foundation for establishing the following orders :

EMOL-



EMOLLIENTIA HUMECTANTIA; as examples of which may be mentioned, *Aqua tepida*, *Vapores tepedi*.

EMOLLIENTIA LAXANTIA.—*Althea*, *Malva*, *Libium Album*.

EMOLLIENTIA LUBRICANTIA.—*Olea blanda*, *Adeps*, *Axungia*.

## § 2. Of the Use of Emollients.

### CXLIX.

IN the application of this class of medicines to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects, as producing a change in the state of the solids themselves; in consequence of which they may be employed: To restore the natural flexibility to parts mor-

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bidly

bidly rigid: And to diminish a morbid increase of tonic power.

2. From their effects, as producing a change in the state of the containing vessels; in consequence of which they may be employed: To obviate the effects of morbid distension: And to remove obstructions.

THESE indications may be illustrated and confirmed, from considering the effects of this class of medicines as employed in cases of Contraction, Rigidity, and Tumor.

### CL.

THE principal circumstances regulating the choice of orders in the class of emollients, may be deduced from the following observations concerning each:

EMOLLIENTIA HUMECTANTIA. The individuals referred to this order are, from their nature, fitted for both sources of indication. They are often of great service to obviate the effects

effects of morbid distension; and are, in general, preferable to diminish a morbid increase of tonic power.—From the degree of effect they produce, they are chiefly adapted for those cases in which considerable and sudden changes are requisite.—The constitutions to which they are chiefly fitted, are the vigorous and robust.

**EMOLLIENTIA LAXANTIA.** The individuals referred to this order are, from their nature, principally adapted to those cases where a change is required in the state of the containing vessels; and are most generally employed: To obviate the effects of uncommon distension: And to remove obstructions.—From the degree of effect they produce, they are fitted for considerable, but slow changes—They seem to be equally admissible with all constitutions; little, therefore, with regard to choice, can be drawn from thence.

**EMOLLIENTIA LUBRICANTIA.** The individuals referred to this order are, from their nature, chiefly adapted to produce a change  
in

in the state of the solids themselves ; and seem preferable to all others, to restore the natural flexibility to parts morbidly rigid.—From the degree of effect they produce, as well as the former order, they are fitted for considerable, but slow changes.—With regard to constitutions, the same observation will hold of this, as was made of the order last mentioned.

## CLI.

THE cautions to be observed in the employment of emollients, as derived from their nature, are chiefly with regard : To the power they possess as acting on the system in general : And to the effects of a degree of laxity induced on particular parts, higher than is natural to these.—The conditions of the system which chiefly require attention in their employment are : The young : The delicate : And the weak.—The circumstances chiefly to be attended to in the necessary regimen, respect : The temperature and air in which the patient is kept : And the mode of applying the emollient.

## CLII.

## CLII.

THE individuals belonging to this class of medicines, are chiefly contra-indicated in those cases where there occur: A high degree of morbid relaxation in the system in general: And a particular sensibility of the moving fibres.

## CHAP.

## C H A P. XX.

## OF CORROSIVES.

§ 1. *Of the Nature of Corrosives.*

## CLIV.

**B**Y corrosive medicines are meant those substances which possess a power of destroying the texture of various solid parts of the animal body to which they are directly applied; while, at the same time, they produce their effect independent of any mechanical action.

## CLIV.

THE direct effects arising from this class of medicines, are: That they excite a sensation  
of

of pain referred to the part acted upon : They destroy the texture of the part to which they are immediately applied : They occasion a separation of the part destroyed, from that to which their influence does not extend : And they lay open the extremities of the sound vessels, disjoined from the parts destroyed.

## CLV.

THE changes arising in the system from these direct effects are: Insensibility in the part immediately acted upon : Diminution of the particular solids to which they are applied : And evacuation of pus from a particular set of vessels.

## CLVI.

AMONG the individuals belonging to this class, there seems to be a foundation for establishing the following orders :

CORROSIVA ERODENTIA ; as examples of which may be mentioned, *Vitriolum cæruleum*, *Alumen ustum*.

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CORROSIVA CAUSTICA.—*Causticum Lunare;*  
*Oleum Vitrioli.*

§ 2. *Of the Use of Corrosives.*

CLVII.

IN the application of this class of medicines to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects, as producing a state of insensibility in the part; in consequence of which they may be employed: To facilitate and render effectual openings into particular lodgements of matter.

2. FROM their effects, as producing a diminution of solid parts; in consequence of which they may be employed: To remove morbid excrescences: And to remove morbid indurations.

3. FROM

3, FROM their effects, as producing a discharge of pus ; in consequence of which they may be employed : To facilitate the healing of old ulcers : And to facilitate the action of the *epispastica suppurantia*.

THESE indications may be illustrated and confirmed, from considering the effects of this class of medicines as employed in cases of Abscesses, Fungous excrescences, and Calloused ulcers.

#### CLVIII.

THE principal circumstances regulating the choice of orders in the class of corrosives, may be deduced from the following observations concerning each :

CORROSIVA ERODENTIA. The individuals referred to this order are, from their nature, chiefly fitted for producing a destruction of solid parts, and may frequently be employed with advantage to remove morbid excrescences or indurations.—From the degree of effect they produce, they are applicable only where slight changes are wanted.—If any con-

stitutions afford a foundation for preference in the use of this order, they are those of the tender and delicate.

CORROSIVA CAUSTICA. The individuals referred to this order are, from their nature, adapted for all the purposes to be answered by the class: They are alone employed to facilitate openings into lodgements of matter, and to facilitate the action of the *epispastica suppurantia*.—From the degree of effect they produce, they may be used where slight changes are wanted: And are alone employed where the most considerable changes are required.—The constitutions to which they are principally adapted, are the indolent and robust.

#### CLIX.

THE cautions to be observed in the employment of corrosives, as derived from their nature, are chiefly with regard: To the pain they excite: And to the destruction of solids which they occasion —The conditions of the system which chiefly require attention in their employment are: Childhood: And high-

highly irritable Habits.—The circumstances chiefly to be attended to in regimen respect: The quantity of corrosive matter employed: The mode of application: And the position of the matter.

## CLX.

Corrosive medicines are chiefly contra-indicated in those cases where there occur: Peculiar irritability: A high degree of putrid diathesis in the system: And a cancerous disposition.

## CHAP.

## C H A P. XXI.

## OF DEMULCENTS

§ 1. *Of the Nature of Demulcents.*

## CLXI.

**B**Y demulcent medicines are meant those substances which possess a power of diminishing the effects of stimuli on the sensible solids of the body, without producing this in consequence of any change in the state of the nervous power.

## CLXII.

The direct effects to be ascribed to demulcents are: That they lubricate and sheath those parts to which they are topically applied: They enter the circulation, and exert the same effects at different excretories where they happen to be collected: And they diminish  
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the activity of different stimuli with which they happen to be conjoined in the body.

## CLXIII.

THE changes arising in the system, from the effects above mentioned are: A diminution of the facility of action on sensible parts: And a diminution of the force of the acting power by which these parts may be affected.

## CLXIV.

AMONG the individuals belonging to this class, there seems to be a foundation for establishing the two following orders.

DEMULCENTIA NUTRIENTIA; as examples of which may be mentioned *Triticum*, *Oryza*, *Saccharum*,

DEMULCENTIA LENIENTIA.—*Gummi Arabicum*, *Tragacantha*, *Ichthyocola*.

§ 2. *Of the Use of Demulcents.*

## CLXV.

IN the application of demulcents to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects, as acting on the sensible solids; in consequence of which they may be employed: To diminish the action of ordinary stimuli upon parts affected with a morbid degree of sensibility: To obviate a morbid deficiency in the natural coverings of parts: And to obviate the action of morbid stimuli.

2. FROM their effects, as acting upon the stimulating fluids; in consequence of which they may be employed: To diminish secretions morbidly increased in quantity: To render secretions, morbidly acrid, more mild: And to diminish morbid acrimony in the system in general.

THESE



THESE indications may be illustrated and confirmed, from considering the effects of this class of medicines as employed in cases of Catarrh, Gonorrhoea, and Scurvy.

## CLXVI.

THE principal circumstances respecting the choice of orders in the class of demulcents, may be deduced from the following observations concerning each.

DEMULCENTIA NUTRIENTIA. The individuals referred to this order are, from their nature, chiefly adapted to act upon the state of the fluids; And are principally useful in diminishing morbid acrimony in the system in general.—From the degree of effect they produce, they are applicable where the most considerable changes are requisite; but, at the same time, they are proper only where slow changes are necessary.—From diversities in constitutions, little ground of preference is afforded in the employment of this order.

DEMULCENTIA LENIENTIA. The individuals referred to this order are, from their nature,

ture, well adapted for an action on the sensible solids: They may also be employed for producing changes on stimulating fluids: And are useful both to diminish secretions and to render them more mild.—From the degree of effect they produce, they may be of use where considerable changes are requisite: But they are chiefly applicable where slight, but sudden, changes are wanted.

## CLXVII.

THE cautions to be observed in the employment of demulcents, as derived from their nature, are chiefly with regard: To the effects of diminished excretion: And to the diminution of the action of ordinary stimuli.—The conditions of the system chiefly requiring attention in their employment are: Habits naturally insensible: And those in which there occur peculiar morbid states in the stomach.—The circumstances chiefly to be regarded in the regimen necessary, respect: The mode of exhibiting the medicines: And the diet requisite during their use.

## CLXVIII.

## CLXVIII.

DEMULCENT medicines are chiefly contra-indicated in those cases where there occur : Morbid viscosity in the fluids of the body in general : A high degree of morbid viscosity in the secretions : And uncommon want of sensibility in the excretory organs.

K k

CHAP.

## C H A P. XXII.

## O F   S T I M U L A N T S.

§ 1. *Of the Nature of Stimulants.*

## CLXIX.

**B**Y stimulant medicines are meant those substances which possess a power of exciting the animal energy ; and which, at the same time, can be applied in such a manner as not to be destructive of life while they produce this effect.

## CLXX.

THE direct effects to be ascribed to stimulants are: That they produce a particular sensation referred to the part more immediately acted upon : They increase the action of muscular fibres in that part, particularly in its vessels :

vessels: They excite a sense of pain: They produce a peculiar sensation in the system in general: And they increase the energy of the sensorium,

## CLXXI.

THE changes arising in the system from the effects above-mentioned are: An acceleration of the motion of the blood in the part to which they are particularly applied: An increase of the force of circulation in the system in general: An increase of various secretions: A higher excitement of the powers of sensation: And an augmentation of mobility and vigour in the muscular fibres through the system in general.

## CLXXII.

AMONG the individuals belonging to the class of stimulants, there seems to be a foundation for establishing the following orders

STIMULANTIA TOPICA; as examples of which may be mentioned, *Sinapi*, *Raphanus rusticanus*, *Cantharides*.

STIMULANTIA DIFFUSIBILIA.—*Spiritus Cornu Cervi, Alcohol, Electricitas.*

STIMULANTIA CARDIACA.—*Cinnamomum, Nux moschata, Vinum.*

§ 2. *Of the Use of Stimulants.*

CLXXIII.

IN the application of stimulant medicines to use, the indications deducible from their nature may be derived from the following sources:

1. FROM their effects, as acting upon the circulation; in consequence of which they may be employed: To facilitate the passage of blood through parts in which it is morbidly obstructed: To augment the force and celerity of the circulation where it is morbidly slow and weak: And to increase the quantity of secretions where morbidly diminished.

2. FROM their effects as acting on the powers of sensation; in consequence of which they  
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may be employed: To quicken the senses where morbidly dull; To rouse the mental faculties when in a lethargic state: And to exhilarate a despondent condition.

3. AND, from their effects, as acting on the moving fibres; in consequence of which they may be employed: To restore the power of motion where morbidly deficient: And to increase the strength of motion where morbidly weak.

THESE indications may be illustrated and confirmed from considering the effects of this class of medicines as employed in cases of Apoplexy and Palsy.

#### CLXXIV.

THE principal circumstances regulating the choice of orders in the class of stimulants, may be deduced from the following observations concerning each;

STIMULANTIA TOPICA. The individuals referred to this order, from their nature, are, in some measure, fitted for indications reduced  
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to all the sources. As affecting the circulation, they are chiefly useful to facilitate the motion of the blood through parts in which it is morbidly obstructed. As affecting the powers of sensation, they may be usefully employed to quicken the senses, or to rouse the mental faculties: And, as acting on the moving fibres, they are of peculiar advantage to restore the power of motion where morbidly deficient.—From the degree of effect they produce, they are fitted for cases where these changes are requisite to a considerable extent; and likewise where they are suddenly wanted.—The constitutions to which they are principally adapted, are the strong and vigorous, and those in whom effect are chiefly requisite at a particular part.

STIMULANTIA DIFFUSIBILIA. The individuals belonging this order, as well as the former, may likewise, from their nature, be employed for indications referable to all the sources: As affecting the circulation, they are chiefly useful to augment its force and increase secretion: As acting on the power of sensation, they may be employed for all the indications

indications referred to that source: And, as affecting the moving fibres, they may be used both to quicken and strengthen motions.—From the degree of effect they produce, they may be employed where the highest and most sudden changes are requisite; but the changes they produce are frequently not durable.—The constitutions in which they are chiefly applicable are the torpid, and those with whom effects are principally requisite over the whole system.

STIMULANTIA CARDIACA. The individuals reduced to this order are, from their nature, chiefly useful as affecting the powers of sensation; and, on this account, are preferable to others for exhilarating a despondent condition.—From the degree of effect they are capable of producing, they may be adapted for any changes in this way.—The constitutions in which they are chiefly of use as stimulants, are those of a melancholic temperament.

#### CLXXV.

THE cautions to be observed in the employment of stimulants, as derived from their nature,

ture, are chiefly with regard: To the pain they excite: To the violence of circulation which they occasion: To the flow of spirits they produce: To the mobility of the system, which arises from their employment; And to the collapse, which is the consequence of high and sudden excitement.—The conditions of the system which chiefly require attention in their employment, are delicate and irritable habits.—The circumstances chiefly to be attended to, in the regimen necessary, respect, the nature of the particular diseases in which they are used.

## CLXXVI.

THE individuals belonging to this class are chiefly contra-indicated in those cases where there occur: A high degree of morbid irritability: And circulation uncommonly accelerated.

C H A P.

## C H A P. XXIII.

## OF SEDATIVES.

§ I. *Of the Nature of Sedatives.*

## CLXXVII.

**B**Y sedative medicines are meant those substances which possess a power of diminishing the animal energy, and are, at the same time, capable of producing this effect without the destruction of life.

## CLXXVIII.

THE direct effects to be ascribed to sedative medicines are: That they diminish the sensibility of the part immediately acted upon: They diminish the action and tonic power of

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the muscular fibres in the part: They produce a peculiar sensation in the system in general: And they diminish the energy of the sensorium.

## CLXXIX.

THE changes arising in the system, from the use of this class, are: Retardation of the blood's motion in the part more immediately acted upon: Diminution of the force of circulation in the system in general: Diminution of quickness in the powers of sensation and reflexion: And diminution of vigour in muscular action through the system in general.

## CLXXX.

AMONG the individuals belonging to this class, there seems to be a foundation for establishing the following orders:

SEDATIVA SOPORIFICA; as examples of which may be mentioned, *Papaver*, *Hyosciamus*, *Opium*.

SEDATIVA REFRIGERANTIA.—*Sales Neutri, Acidi.*

§ 2. *Of the Use of Sedatives.*

CLXXXI.

IN the application of sedatives to use, the indications deducible from their nature may be derived from the following sources:.

1. From their effects, as acting upon the circulation; in consequence of which they may be employed: To diminish the force and celerity of the blood's motion where morbidly augmented.
2. FROM their effects, as acting on the powers of sensation; in consequence of which they may be employed. To abate violent pain: And to procure sleep, in cases of preternatural watchfulness.
3. And from their effects, as acting on the moving fibres; in consequence of which they may be employed: To restrain inordinate motions:



tions: And to moderate excessive evacuations.

THESE indications may be illustrated and confirmed from considering the effects of this class of medicines, as employed in cases of Inflammation, Toothach, and Dyſentery.

### CLXXXII.

THE principal circumstances regulating the choice of orders in the class of sedatives, may be deduced from the following observations concerning each:

**SEDATIVA SOPORIFICA.** The individuals referred to this order are, from their nature, principally adapted for those indications to be answered by affecting the powers of sensation, and the moving fibres,—From the degree of effect they produce, they may be employed where the most considerable changes are wanted.—The constitutions to which they are best adapted, are the robust and vigorous.

**SEDATIVA REFRIGERANTIA.** The individuals belonging to this order, from their nature,



ture, are chiefly useful as affecting the circulation.—From the degree of effect they produce, they are fitted only for inconsiderable changes.—The constitutions to which they are chiefly adapted are, the sanguine and plethoric.

### CLXXXIII.

THE cautions to be observed in the employment of this class of medicines, as derived from their nature, are chiefly with regard : To the insensibility which they produce : To the atonia they occasion in the muscular fibres, particularly in the blood-vessels : And to the suspension of animal actions which they produce.—The conditions of the system which chiefly require attention in their employment are : Irritable and relaxed habits : And those who are constitutionally liable to delirium from their use.—The circumstances chiefly to be attended to, in the necessary regimen, respect : The regulation of the dose of the medicine employed : The state of quiet in which the patient is kept during the operation of the class : And the habitual use of the class.

### CLXXXIV.

## CLXXXIV.

SEDATIVE medicines are chiefly contra-indicated in those cases where there occur: A high degree of morbid torpor in the system: Remarkable debility: And violent inflammation.

CHAP.

## C H A P. XXIV.

## OF ANTISPASMODICS.

§ 1. *Of the Nature of Antispasmodics.*

## CLXXXV.

**B**Y antispasmodic medicines are meant those substances which possess a power of allaying inordinate motions in the system, particularly those involuntary contractions which take place in muscles naturally subject to the command of the will.

## CLXXXVI.

THE direct effects to be ascribed to the in-  
divi-

dividuals belonging to this class of medicines are: That they counter-act and remove causes exciting contractions: And they diminish the influence of the nervous energy in the part.

## CLXXXVII.

THE changes arising in the system, from these direct effects, are: A restoration of the proper balance of the nervous energy in different parts of the body: A restoration of the due influence of the will: And a restoration of the natural state of tension to the muscles.

## CLXXXVIII.

AMONG the individuals referred to this class of medicines, there seems to be a foundation for establishing the following orders:

ANTISPASMODICA STIMULANTIA; as examples of which may be mentioned, *Alkali volatile*, *Oleum essentielle Menthae*.

ANTI-

ANTISPASMODICA SEDATIVA.—*Camphora*,  
*Castoreum*, *Moschus*.

§ 2. *Of the Use of Antispasmodics.*

CLXXXIX.

As the action of this class of medicines depends entirely upon the presence of a morbid state, what has been advanced with regard to their nature, will, in a good measure, serve to illustrate their use. It is only necessary to add, that, as restoring the proper balance of the nervous influence, they may be used: To remove spasmodic contractions taking place in different muscles: And to allay convulsive agitations.

THESE indications may be illustrated and confirmed from considering the effects of antispasmodics as employed in cases of Epilepsy and Cramp.

## CXC.

THE principal circumstances regulating the choice of orders in this class of medicines, may be deduced from the following observations concerning each :

ANTISPASMODICA STIMULANTIA. The individuals referred to this order are, from their nature, preferable in those cases where, with an antispasmodic, it is necessary to conjoin a stimulant effect.—From the degree of effect they produce, they are chiefly useful where inconsiderable changes are requisite ; but, at the same time, they are best adapted where sudden changes are necessary.—The constitutions to which they are principally adapted are, the melancholic and insensible.

ANTISPASMODICA SEDATIVA. The individuals referred to this order are, from their nature, preferable in those cases where, with an antispasmodic, it is necessary to conjoin a sedative effect.—From the degree in which  
they

they operate, they may be used where the most considerable, but slowest changes, are wanted.—The constitutions in which they are chiefly preferable to the preceding order, are the robust and sanguine.

## CXCI.

THE cautions to be observed in the employment of this class of medicines, as derived from their nature, are chiefly with regard to the stimulant or sedative effects of the individual used.—The conditions of the system, and circumstances in regimen, which chiefly require attention in their employment, depend likewise upon the particular order of the class which is employed; and, from what has already been said of the classes of stimulants and sedatives, these may be easily understood.

## CXCII.

WHEN those affections exist which may be relieved by the employment of antispasmodic medicines, the only morbid conditions contra-



tra-indicating the use of individuals, are such as will be aggravated by the properties of particular orders; and are, therefore, to be learned from what has been said of the classes of stimulants and sedatives.

The END.











